Sociological Forum

"Fear Factor(y)": Academia. Subtle Mechanisms of Symbolic Domination in the Academic Field[1,2]

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The structure of and recent transformations in science affect the structure of the academic field, and ultimately the actors themselves: Today, academics often experience pressure, stress, and emotional discomfort. In this contribution, we show how emotions such as fear and concern may arise in reaction to the contemporary conditions of academic life, and how these emotions can operate as elements of the hierarchies between human actors (scientists) and institutional actors (universities). Using qualitative interview data with scholars from the United States, we illustrate how fear structures the actors' social practices—and how fear is thereby translated into the positional structure of the academic field. We discuss two sets of relations—intra- and inter-institutional—that entail structuring mechanisms. We thus attest how fear as an individual trait and social characteristic becomes part of the (re-)production of the fields' hierarchy.

INTRODUCTION

Traditionally, science has been ascribed the function of enlightening society and enabling societal progress. The ideal image of science is that of a sphere sustained by rational practices and communications committed to truth. In recent times, this image has become even more pronounced, with the public perception of scientists as experts who counteract "fake news" and "alternative facts" with rationality and facts. While this description as a normative ideal (see already Merton 1942) certainly has its value, the question arises as to what extent rationality actually shapes everyday scientific life, and what role seemingly extra-scientific aspects such as emotions play for the structures and dynamics of science.

The dimension of emotions is of particular relevance for contemporary science, which has, in recent decades, undergone significant structural and cultural

transformations induced by external fields such as the economy and politics. The term "academic capitalism" (Münch 2014; Slaughter and Rhoades 2004) is an over-arching critical concept referring to the far-reaching changes science and scientists have been experiencing in this transformative process. These changes entail decreased autonomy of scientific practice, metrification (Münch 2015; Wilsdon et al. 2015), intensified competition (Münch 2016), a culture of competitive accountability (Watermeyer 2019), rising inequalities (Münch 2014), and the transformation of research paradigms (Kempner 2020; Münch 2016; Smith 2010).

Several authors suggest that these structural developments have major conse-quences for the communication and relations between scientists (Espeland and Sau-der 2016:177), for scientific practice (Holland et al. 2016; Holtz et al. 2017), and ultimately for the realm of scholars' emotions and affects (Chubb et al. 2017). Recently, initiatives such as the one from the Wellcome foundation in the UK have emerged that seek to actively improve this personal and emotional dimension of a deteriorating research culture (Moran et al. 2020).

In particular, research provides us with evidence that a growing number of scholars are confronted with uncertainty, risks, stress, worries, and various anxieties (Berg et al. 2016; Evans et al. 2018; Mulligan and Danaher 2021; Oancea 2014:91; Peake and Mullings 2016; Woolston 2020). Ever more researchers are tackling the impact of science's ongoing transformation in the realm of fear, whether by way of empirical investigation (Martínez-Nicolás and García-Girón 2021; Weinstein et al. 2019) or by sharing personal stories about the anxieties they experience (Gill 2016; e.g., Brunila and Valero 2018). Publications in higher education and related fields are increasingly concerned with how structures in academia reinforce emotions and affects (e.g., see Clegg 2013; Hermanowicz 2009; Mulcahy and Marti-nussen 2022; Naidoo 2018); with the challenges scientists experience with regard to their well-being (Sabagh et al. 2022; Tytherleigh et al. 2005; Wray and Kinman 2021); and with the frequently deleterious emotional consequences of these circumstances (Chubb et al. 2017; Watermeyer 2019)—developments which, overall, can "erode the quality of science" (Cardew 2020). The phenomena described here run the gamut between subjective manifestations such as diffuse perceptions of a threat to one's work–life balance (Lashuel 2020) to very concrete phenomena involving the deterio-ration of physical and mental health (Cho and Hayter 2020).

While research has developed a differentiated account of emotions in higher education (Beard et al. 2007) and science (Bloch 2012; Chubb et al. 2017; Nai-doo 2018), fears have enjoyed a less nuanced research perspective. Most importantly, little is known about how subjective emanations of fear are systematically connected with the stratification of science—that is, how the recent transformations of the sci-entific field may impact different scientists' emotions and affects in different ways, and how this may induce practices that contribute to the stratification of science. Remarkably, while the sociology of fear has proliferated in recent years, making important contributions to the study, for example, of the interplay between fear and related concepts such as concerns, anxieties, and worries, of the rhetoric and politics of fear with regard to minority discrimination (Ahmed 2014), of the rise of right-wing populism (Wodak 2015), or of social control in the "war on terror"

(Altheide 2009), scientists interested in the sociology of fear had been peculiarly silent for a long time regarding their own academic lifeworld.

In this article, we join this debate by connecting insights from the sociology of fear—as it continues to grow in relevance—to this increasingly important discourse in higher education. In particular, we draw on reflections on the social conditioning and structuring power of fear to provide a sociological view of a powerful emotion in the current situation of modern science. We will investigate how fears, concerns, and the perception of risks are intertwined with the ongoing transformation of science, that is, how they are produced by the scientific system and contribute to its stratified structure. For our theoretical conceptualization, we draw on habitus-field theory, which has proven useful in the context of both the sociology of science (Hamann 2018; Mendoza et al. 2012; Münch 2014) and the sociology of fear. Based on a view of scientific fields which are structured by both objective conditions and subjective dispositions, we investigate how the stratification of science and fear in its different manifestations are interrelated. We use US academia as an exemplary case, for academic capitalism is highly advanced and indeed still evolving in the United States (Finkelstein et al. 2016:10); this allows us to reconstruct the ongoing interplay between the structural and subjective aspects of academic life. Drawing on the United States serves as a revealing study, for its conditions and stark stratification can be interpreted as a kind of future model for the development of scientific disciplines in other countries (e.g., the spread of "ranking mania"; Davies and Zarifa 2012:145). Employing a qualitative approach, we will assess how fear manifests itself in the formal hierarchy *within* universities, and examine the role which anxieties play in the relations *between* hierarchically ordered universities. In doing so, we put a particular emphasis on midranking institutions, which—despite being widely considered to be the most affected by academic capitalism (Gonzales et al. 2014; O'Meara 2007)—have to date been neglected. Based on an iterative-abductive approach, we will analyze interviews conducted with 42 scholars from different hierarchical levels within their universities and from seven universities with different positions in the scientific field. In doing so, we will develop an empirically grounded theoretical view of the role that fear and related emotions can play for the hierarchical structuration within and across universities, and thus for contemporary, institutionalized academic fields in Western countries.

ACADEMIC FIELD, HABITUS, AND FEAR

To theoretically grasp the role of fear and its related concepts in academic practice and the hierarchical structure of academia, we draw on Bourdieu's theoretical framework. The concepts developed by Bourdieu are well suited to addressing issues related to the sociology of science (cp. Mendoza et al. 2012; Münch 2014) and universities (Baier and Schmitz 2019; Scherer 2020), and to dealing with the issue of fear as a phenomenon involved in societal stratification. From this perspective, a scientific discipline can be understood as a specific field with its own culture but also with different, often opposing positions taken by institutional and human actors. From a field-theoretical perspective, scientific disciplines are considered relatively autono-

mous spheres that are structured not only by "inner-scientific" (theoretical, method-ological, etc.) relations, but also by "extra-scientific" factors (cp. Bourdieu 2004:45). The latter include both direct and highly mediated social (institutional, resource-related, etc.) mechanisms in the field, as well as the social conditions of other fields affecting science (e.g., political, economic fields, etc., but also other scientific fields). Thus, "non-scientific" aspects such as economic and institutional resources are seen as contributing constitutively to the structure of any scientific field, which is why a major emphasis is put on the different ways different scientific fields are affected by external influences such as economy or politics. As a result of these different mecha-nisms and influences, scientific fields take a hierarchical form, with resources of dif-ferent kinds monopolized by a few scientists and universities.

Another strength of the field-theoretical perspective lies in the fact that it brings to the fore the interplay between the structures of a field and the dispositional structures of the actors. The concept of habitus, which describes inert yet malleable and adaptable structures of practice, perception, and feeling, allows us to examine how social and institutional structures are interrelated with emotions such as fears (cp. Bourdieu 2000).[5] In the context of scientific fields, Bourdieu (2000:65) argues that "desires, needs and passions" are sometimes more relevant to the processes of the field than "the force of arguments." More specifically, authors such as Dev-ereux (1967) or Gengnagel and Schmitz (2018) argue that science (like any field) has always been structured by fear, and some authors emphasize the increased relevance of fear and related concepts for contemporary science (Espeland 2016; Müller 2014).

The link between social and institutional structures and emotions such as fear is a major aspect of field theory, with its focus on societal domination. With the con-cept of symbolic domination, another important field-theoretical concept, this per-spective sheds light on the ways how the dominated actors' perceptual categories and feelings are subtly, yet powerfully influenced, and also how the underlying power relations are simultaneously naturalized and subjectivized. Symbolic domina-tion essentially rests on seemingly personal sensations such as "shame, timidity, and anxiety" or "guilt" (Bourdieu 2000:169). In fact, symbolic relations of domination often do take the form of anxieties (Bourdieu 2001), with fear as an important social mechanism of inscribing the "sense of one's place" into the agent (Bour-dieu 1985:728), that is, structuring and refiguring his or her habitus. Fear as a power-ful emotion that motivates and inhibits practices can be significantly involved in the production and reproduction and legitimization of social stratification: It often appears as "natural" characteristic of a subject, thus obscuring the underlying social preconditions of anxiety. It is important to note here that this does not mean that fear manifests in a uniform way (in the same forms or with the same content), or that all actors reflect and verbalize their fears in the same way. Rather, the effects of sym-bolic domination can appear in very different, habitus-specific ways, such as extreme fears, subtle concerns, rational calculations of risks, anxieties as stable personality

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[5] In the general context of the definition of a field, Bourdieu states that not only "hope" but also "fear, associated with objective and subjective uncertainty as to the outcome of the game, are the preconditions for commitment to the game" (Bourdieu 2000:238).

traits, pathological phobias, etc. Likewise, such emotions differ regarding the objects of fear (such as social fears, evaluation anxiety).

In recent decades, external relations and internal relationships in the sciences have transformed considerably, a circumstance that draws attention with new urgency to the "extra-scientific" influences that form and transform contemporary academia and thus affect scholars themselves. These changes have been accounted by what is known as "academic capitalism" (Münch 2014; Slaughter and Rhoades 2004), a concept that critically reflects the intrusion of economic logics into the academic field. Overall, academic capitalism has altered the academic field in six ways.

First, with the advent of New Public Management the scientific field experienced *decreasing autonomy*. Whereas universities were mostly under the influence of faculty in the 1970s, in recent decades they have become increasingly controlled by administrators (Ginsberg 2011) who engage "in 'new managerialism' by implementing change from the top down" (Tuchman 2009:11), which, in effect, undercuts faculty members' authority and affects scientific practices on the "macro" level. A significant element of this increased influence is, second, *metrification* (Münch 2015; Wilsdon et al. 2015). Research is no longer oriented solely toward knowledge production; instead, publications and citations become output indicators that measure productivity (on the "meso" level, a university's or department's productivity; on the "micro" level, an individual scholar's), reflected in ranking positions (Altbach 2006; Hazelkorn 2011; Marginson and van der Wende 2007; Yudkevich et al. 2016). Third, through this process, scholars' habitus has become conditioned to achieving numerically measurable productivity (Münch 2014:3), further intensifying the already *fierce competition* among departments and scholars who increasingly compete for such indicators. Especially the increased visibility of other scientists within the metric reference system makes it difficult for many to escape the harsh evaluation imperatives of the field. Fourth, this *culture of competitive accountability* (Watermeyer 2019), in which values and self-understanding are linked to output measures (Ball 2021:15), exacerbate the already stark material and symbolic inequalities in US academia. Although these inequalities have always been present, visible in the small number of highly prestigious universities with extensive assets alongside and a larger number of institutions with far fewer resources, fifth, this new culture has led to even *higher degrees of stratification* (Davies and Zarifa 2012; Münch 2014) at the "macro" level. Sixth, academic capitalism also challenges *research paradigms*; for instance, innovative ideas are inhibited by considerations of policy (Münch 2016; Smith 2010), feeding further into the loss of autonomy at the "macro" level. These effects, together with the continual increase in contingent faculty, and the internationalization and "projectification" of science, have led to the progressive transformation of academic working conditions, making them more and more precarious.

These developments, admittedly, do not make fear an entirely new phenomenon in the scientific field: Social origin shapes an actor's habitus and their emotional and affective states, and by adapting to the scientific field the internalization of field-specific interests (such as accepting the legitimacy of symbolic hierarchies) can also take the form of fears (cp. Gengnagel and Schmitz 2018). However, the conditions of the field and the extent of field-specific competition, as well as the question of the extent to which success in science is a factor in determining inner-scientific identity and

extra-scientific material existence, can—depending on one's position in the field—increase and intensify anxiety. In the context of an ever-changing academic field, some authors describe the increasing prevalence of objective risks as well as subjective reactions such as worries, fearful dispositions, or practices of avoidance (cp. Berg et al. 2016; Chubb et al. 2017; Holland et al. 2016). For instance, in their work on "engines of anxiety", Espeland and Sauder (2016) give striking examples of the effects of metrification. The authors show how rankings can produce anxieties for administrators, for whom external measurements can become a constant threat, and who can exhibit severe emotional responses (such as distress) when their institution falls in the rankings. These developments lead to increasing pressures that are not without consequences for scholars, who are more and more subject to evaluations—to ranking and scoring regimes restricting their degrees of freedom and affecting their working conditions and, ultimately, their emotions (Weinstein et al. 2019:60). The culture of competitive accountability is now inscribed in the researchers' habitus, inducing scholars' fears (Watermeyer 2019) and creating a kind of "neoliberal academic subject" (Ball 2021:15). However, while fear is usually understood as an effect resulting from the reconfigurations of the scientific field (Chubb et al. 2017), habitus field theory also allows us to understand fears as "affective" (Loveday 2018:10), that is, as a component of the mechanisms of hierarchization itself, since differences in the experience of fears can retranslate into the structural hierarchy.

DATA AND METHODOLOGY

As a methodological strategy, we employ a qualitative research design that includes interviews with narrative components. This will enable us to grasp how actors from different positions perceive science's structural preconditions in connection to their own subjective experiences, and to reconstruct their accounts of how fear (and its related concepts) and the (changing) structure of the field manifest in their colleagues, superiors, subordinates, and the administration. We conducted interviews with 42 scholars, applying a semi-structured design with story prompts that included the use of an interview guide, which mainly involved questions on perceptions of competition and changes in academia. Fears, risks, concerns, and semantically similar terms, in contrast, were deliberately *not* a part of the guideline, as not directly addressing such emotions allows us to reveal the respondents' own thematization of fears and related concepts. In the introductory part of the interview, the scholars were invited to describe their academic trajectories and their motivation for an academic career. Depending on the interviewees' career stage, their past experiences were discussed by focusing on perceived changes in the field. This included perceived competition within their discipline, and the distribution of and competition for third-party funding. Furthermore, the interviewees' perceptions of rankings and prestige differences were a subject of reflection. The academic job market situation was also discussed and, additionally, PhD students were asked about their future goals and perspectives within academia. We also put a particular emphasis on the subjective experience of these conditions, such as how much the interviewees address the issue of pressure in academia.

We included several academic *career stages* to capture different perspectives based on experience: 16 PhD students, 2 post-docs, and 24 professors were interviewed. Of the 24 professors, 6 hold an assistant professor position, 4 are associate professors, and 14 are full professors. Four of these full professors hold emeritus status but are still active at their university. Although scholars were only interviewed once, the research design allows us to cover a diachronic perspective as different cohorts and retrospective interview elements were included. To account for different *institutions' hierarchical positions*, we selected 12 departments from seven different PhD-granting US universities.[6] The interviewees' affiliation was classified, via their disciplinary ranking position in the US News and World Report, into three groups: The top 10% of ranked departments, mid-tier departments (the following 20%), and those ranked below the top 30%. We selected a tripartite classification in order to go beyond a typical elite versus non-elite differentiation, thus capturing those institutions that are located "in-between" (Beyer 2021), also framed as "striving" institutions (Gonzales et al. 2014; O'Meara 2007), meaning that they are likely to be "actively engaged in organizational behaviors to fulfill their aspirations of greater prestige" (O'Meara 2007:124f). By covering three different hierarchical types of universities, our data are not restricted to subjectively perceived fears alone; we can also connect the scholars' subjective emotions to their positions within the (academic) structure and thereby identify possible interrelations between subjective and structural moments. This also includes the perceived connections between the scholars' positions and the (academic) structure, and thus how their practices are affected by and affect the fields' structure.

In our analysis, we do not treat fear, worries, or concerns as synonymous, but rather focus on a broader semantic field of related terms in order to provide a differentiated framework that includes the variety of emotional and practical manifestations that arise from subjectively perceived and/or objectively given threats. Thus, instead of defining such terms a priori, we will generate a systematic differentiation as derived from the engagement with our data.

For our interpretative analysis, the interviews were transcribed verbatim, anonymized, and analyzed following an iterative-abductive approach (Timmermans and Tavory 2012) that aligns well with the premises of grounded theory (Strauss and Corbin 1990). We identified all cases in which fears and related synonyms were expressed in any form, ranging from manifestly expressed emotional distress to—based on our interpretation—subtly articulated emotional distress. Importantly, we also noted whenever no such categories were addressed by respondents who were in similar situations. We then systematically compared, within and between the different institution types, the ways in which fears were expressed latently, manifestly, or not at all. Overall, on this data basis, we will develop an empirically grounded theoretical view of the role that fear plays in hierarchical structures within and across universities.

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[6] In order to carve out more general mechanisms, we investigated two different scientific fields, namely sociology and chemistry, which represent two very different scientific cultures.

EMPIRICAL ANALYSIS

Hierarchical Positions and Academic Cultures of Fear

Overall, we discovered narratives that attest to the close entanglements between the dramatic transformations which the scientific field is undergoing and the emotions and affects scientists experience. Importantly, we found narratives indicating growing pressure, insecurity, and emotional distress throughout a field widely shaped by academic capitalism in terms of decreased autonomy of scientific practice, metrification, intensified competition, a culture of competitive accountability, rising inequalities, and the transformation of research paradigms. Yet, as we shall illustrate, depending on the respective positions within and between the universities' hierarchies, actors do express such emotions in different forms and to different extents. In the following, we depict the link between structural positions and fears, concerns, and worries for each of the three university types as constructed from their hierarchical position in the field. We will then assess how the institutions and their internal conditions relate to each other and, in doing so, how fear in its different forms is involved in the production and reproduction of the hierarchical structure of the academic field.

The Middle Position: The In-Betweeners

In universities located in the middle of the field, we systematically find narratives indicating how the effects of academic capitalism mentioned above have considerably transformed these institutions and their scholars. This particular structural position and situation might imply an especially high potential for emotions and affects that are experienced in the realm of fears, worries, or concerns.

Due to the growing importance of third-party funding and the relevance of rankings as a consequence of the economization of the academic field, the administrations of these striving institutions often want "to transform [their] university into an upper ranked school," as one respondent puts it. Specific narratives detail the ways in which administrations compare their universities with competing institutions, especially by inspecting rankings. While developing and implementing strategies, they repeatedly perceive risks, such as not being able to get their university to rise up the ranks—or, even worse, of falling in the rankings. With the intention of minimizing such risks, they regularly communicate to faculty that—taking one specific response here as indicative of the general impression of the situation at midranking institutions—everyone just needs "to push harder and we'll be up there," which manifests in constant requests for higher publication output and the acquisition of additional third-party funding.

These recurring requests stemming from the increasing competition among departments and the underlying metrification affect the professors' practices and perceptions to a considerable extent; that is, to the extent that the issue of ranking (at the institutional or departmental level) is embraced and taken seriously. Again using quotes from one specific but exemplary institution to illustrate the situation at midranking universities: The issue of "staying the same or continuingly declining in

rank" is expressed by one respondent as a growing concern at their specific university. These interviewees also perceive the effects of growing material inequalities and describe funding shortages as "a big issue in the university," specifically that their departments are not able to "afford all these graduate students, or to hire new people." These financial stressors are described by one respondent—the sentiment is echoed by others—as having led to "big pressures" to apply for external grants. Moreover, PhD students observe how their professors are forced to increasingly comply with the administration's requests to apply for more external funding and thereby being curtailed in their autonomy, for instance when needing to modify their research toward what is fundable. Another in-betweener respondent, a PhD student, reports that their professors seem to be worried about fulfilling publication output numbers—they tell their doctoral students to "publish, publish, publish," ideally in "the top journals" as otherwise it "does not count."

This concern regarding rankings and rating lists induces in-betweeners not only to employ strategies of quantitative expansion of publication, thereby complying with the culture of metrification, but also to include specific qualitative alignments in their work. They often seem to tailor their research according to two conflicting perceived expectation norms. On the one hand, one PhD student observes at his department that "it definitely comes down to having a look at adjustments and figuring out what is really going to get funded" by external funding agencies; it is thus better to "choose a topic that other people think is relevant," one that is "really popular." On the other hand, another PhD student reports that professors usually advise their students to focus on what is widely considered to be contemporary, state of the art research; to frame their topics and model their research as elite university researchers do, using this as a blueprint for their own work. It is exactly these two conflicting orientations that result in the inability to pursue genuinely innovative topics and methods—that is, of research that is not yet established. This lack of innovative topics feeds into the professors' concerns of not being able to move up in the rankings. Here, we see academic capitalism taking effect in the form of researchers' decreased autonomy, pursuing less their own, original research interests but instead increasingly adapting to the external logics of others. These "decisions" simultaneously give rise to a transformation of the overall field's paradigmatic structure, which thus increasingly shifts toward field external or elite norms of research.

While heteronomization, processes of metrification, rising inequalities, and the need to adapt to current research paradigms produce certain concerns among professors, PhD students recurrently describe their experience of the situation at their middle-positioned university as one of extreme pressure. Whereas in past years their departments had provided them with secure funding, they report that this situation has changed drastically during their time in academia. An advanced 6-year doctoral student describes how her department "really did push that on us too" and told them both that it "cannot guarantee funding for graduate students" and that they themselves should keep their "eyes out for grants." These pressures induced by rising material inequalities affect the personal situation and practice of young scientists, most notably their perceptions and attitudes toward their future. PhD students from mid-tier universities are exposed to two opposing pressures, which they characterize as "conflicting logics": They describe being "pushed very, very firmly to get publica-

tions" by faculty while reporting being encouraged to finish their degree in half of the time that previous cohorts used to take. This pressure makes them, as they state, "work faster"; they fear they might lose their jobs if they fail to fulfill these criteria. One respondent even felt like they were sitting "on pins and needles" every year hoping for the department to source financing that secures the continuation of their graduate funding. They report a lack of security, which also affects them in the here and now, and, overall, they paint a picture of a rather precarious generation of academics, directed by their supervisors to behave as they are supposed to do as they "may need it [external funding] to survive."

Rankings that play a major role at the level of administration and professors also have an effect on students by simultaneously giving form to and exacerbating their insecurity, that is, by creating specific objects of fear. A 6-year PhD student emphasizes the high relevance of rankings and evaluations:

> I think rankings matter a lot for the professors and then they kind of take that out on us. [...] There is a lot of pressure from professors to perform at a high level. Have you heard about the graduate evaluations? [...] So, every year, every single graduate student is evaluated by the faculty, and they have a formal evaluation process. The first round is to turn in a sheet with all the professors you've been in contact with the past two years. And you have to list all the different types of contact that you've had with those professors. Then they contact all of the faculty and they say "here is a list of all the students who have claimed to have contact with you: rank the students" [...] and then they rank the students. There's always that sense of pressure, and so they have formal criteria by which they assess you, and they assess your performance, and they create those criteria based on their goals and the way they want to be as a university. It's like "oh, you need to start publishing!" and "why aren't you working with anybody?"

Statements like these indicate how the process of metrification, intensified competition at the university level, and rising material inequalities are translated into PhD students' lives and emotions. In their lifeworlds, a highly stressful atmosphere emerges, since the universally tense funding situation and the "goals" of the university are converted into a specific graduate ranking, to which end the PhD students' performance is constantly "assessed" to ensure their own continued funding. These resulting formal evaluations and performance expectations are directly linked to the continuation of the students' contracts and their relative reputation within the department. The prevailing culture of comparison can cause high levels of insecurity: The intensely competitive atmosphere is not only described as evoking an omnipresent "sense of pressure," but also—as another respondent reports—induces a "scary climate" that causes extreme insecurities among the PhD students we interviewed. This intimidating atmosphere is not limited to each of the cohorts internally, but also seems to create envy and even "hate" between the cohorts. One of the younger PhD candidates reports that the "Fifth year and beyond hated us, the first years, they told us we were taking all their money," which very likely keeps them from forming a sense of belonging. Statements like the one above imply that internal graduate rankings and the attendant constant comparisons within and between the cohorts can be translated into subjective fears. The interview excerpts represent the accounts of students for whom the significant role of rankings and intensified competition translates into two closely related fears: The fear of being evaluated (i.e., judged) and the fear of social comparison.

Importantly, these phenomena are certainly not restricted to the formal dimension of academic life. In addition to fears of not being able to fulfill formal criteria, PhD students report fears regarding informal situations: In this context of an overall stressful competitive atmosphere, students are expected to engage in typical leisure activities, which can, in fact, become a further source of the insecurities discussed so far. A PhD student describes that he experiences casual settings like seminars or afterwork drinks as highly "stressful spaces" in which one "needs to be laid back, yet ready to engage in deep, meaningful conversations using professional prose." Such formal expectations in the realm of the informal, however, are experienced as potential stressors and as an additional challenge to measure oneself against others. There is widespread fear even of insufficient informal performance, and out of fear of shame, some PhD students report avoiding situations in which they might inadequately exhibit social ease, in order to prevent themselves from experiencing social—and thus academic—humiliation.

Such widespread practices of avoidance of informal situations may generate a systematic disadvantage: Anxiety-rooted avoidances and practices indicating insecurity are likely to be noticed, and they can become part of how professors assess their students' overall fit to the department and their ability to navigate the perils associated with academia. One student is well aware that their lack of socializing and visibility might be evaluated negatively, and can feed back in the university's indicator-based world by becoming formalized and eventually metrified. Professors, being forced to (annually) decide on their students' further employment, will take into account the whole academic performance of their students, including both formal and informal aspects. Thus, as another student reports, informal aspects of their performance can materialize in the "funding evaluations for grad students," turning private aspects into official ones and contributing to the doctoral candidates' academic career chances. However, this is not at all an official inadequacy of the professors: They perceive their students' behavior and reactions, and—with the best of intentions—may worry about those who insufficiently fit the academic job market, who are not productive enough, and may even be exhibiting highly insecure behavior. The students' fears can give rise to professors' *worries*, and professors are then very likely to show a well-meaning concern for these students: by telling some of them that they need to change their academic demeanor (how to "speak, act, and dress") —or even by not extending the contracts of others "for their own good." Students, in contrast, who do not have or demonstrate problems, who "work" in both formal and informal situations, are safe candidates in the eyes of their professors. From the perspective of the administration, such students become less risky investments based on the professors' assessments. Subjective conditions—that is, the PhD students' emotions and practices of fear—become objects of risk calculation and are thus objectified and, ultimately, quantified. This makes the students' emotional expressions part of the differentiation between "excellent" and "mediocre," which are then translated back into purportedly neutral numbers or measures.

Overall, when taken together, the accounts from the different hierarchy levels of the middle-positioned universities reveal a systematic relation between fear and the intra-institutional power structure. Fear seems to be operative in the form of *intra-institutional* mechanisms for midranking universities. Due to their specific position,
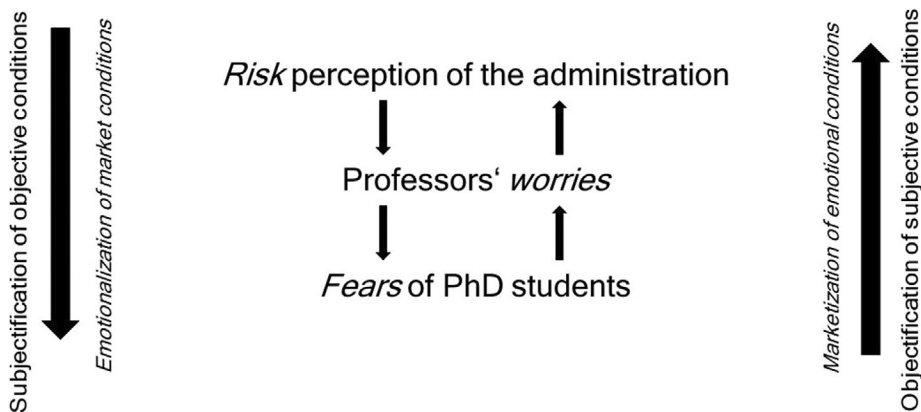
Fig. 1. Intra-institutional mechanisms.

metrification particularly manifests in these administrations' lifeworlds, namely as risk perceptions, which are communicated to professors and thereby transformed into professors' concerns (about fulfilling output numbers)—concerns which are, in turn, translated into the PhD students' fears. Conversely, the students' fears—manifesting in their (insecure) habitus—are perceived by their professors as potential weaknesses, concerned as they are about their candidates not assimilating to the academic world; eventually, these perceptions become part of administrations' risk calculus regarding their goals of advancement (compare Fig. 1).

This translation of structural forces to personal fears and the re-translation of these fears to the realm of risk-oriented practices is part of the overall (re)production and legitimation of success and failure. From a more abstract perspective, in these middle-positioned universities, the mechanisms involved seem to essentially rest upon a process of the *subjectification of objective conditions* and an *emotionalization of market conditions* (top down). The intensely competitive market conditions perceived by administrations seem to impact the PhD student level, where the consequences of these market conditions are experienced and evaluated as subjective fears. Fear, though, is often understood as a merely "personal" trait or deficiency and, in the eyes of colleagues and superiors, practices which indicate fear can appear to be the respective subject's "natural deficiencies." Insofar as the students and those who evaluate them, both formally and informally, agree that failure (in whichever form) is a mere result of personal deficiencies, rather than structural and cultural conditions, and ultimately to the extent to which concrete decisions are made based upon these beliefs, the internal differentiation between PhD students is legitimized and reinforced by fear relations. It is as a result of these processes that some of the in-between PhD students experience emotional distress within their department. The subjectification is accompanied by a complementary re-translation, namely, the *objectification of these subjective conditions*: In as far as the scientists' emotional traits become symbolic and economic goods within a common market of emotional strengths and weaknesses, one may also speak of a *marketization of emotional conditions*.

The Top Position: Elite Scholars

Increasing competition as an aspect of academic capitalism is also addressed by scholars positioned at the top of the hierarchy. Yet, whereas at in-betweener institutions PhDs recurrently express feelings of uncertainty and fears, professors harbor specific concerns, and the administration perceives risks, this is different for the elite. The interviews we analyzed include barely any narratives that demonstrate actively expressed risk perceptions on the part of the elite administration. Although the administration is reported by one respondent as being "all after [patents] like wolves," they usually seem to refrain from communicating mandatory strategies to their staff, and avoid intervening in faculty affairs. This fits into a general culture at elite universities of being willing to take risks, which also manifests in the administration's behavior in passively motivating professors to attract additional money: In this culture, risk receives a different, positive connotation. It is not that risk is simply not avoided, but that risk is, in a way, willingly sought out; the sense here is of "risky" research, which means research projects that are cutting-edge, innovative, and thus at risk of failure.

Nonetheless, professors at top universities are also affected by the increasing competition, albeit they are less affected by the administration's risk calculations, and their concerns are of a different nature. As one scholar reports—who does not want "the stress" of applying for patents that is associated with conforming to the administration's ideas—the elite professors feel a relative freedom from their universities' wishes, rendering the administration a relatively unthreatening actor. Concerns and worries are mentioned, such as about whether future budgetary cuts "will affect the kind of long-term health of the department" and whether the department will still be providing its graduate students with the optimal training they need to continue to succeed on the academic job market. In these professors' view, this is important so that they can continue positioning their academic successors within the field. In contrast to in-betweeners, however, the "pressures" of metrification (such as by rankings), and the professors' worries are *not* passed on to the PhD candidates—instead, these pressures are reflected as the department's responsibility to improve, and therefore concerns regarding, for instance, the health of their students are actually converted into proactive ambitions to protect them.

Just like in the previous case, the professors develop certain strategies to cope with the high levels of competition in contemporary academia. In contrast to the middle-positioned universities, however, these professors are not in favor of adapting to "what is popular" when it comes to their research. Instead, they aim to set the trends, and report having "ideas and things that [they] think are cool." According to one professor, it is "other people" who have to "tailor their research in order to be successful." In addition, the professors' accounts indicate a particular significance attached to novelty or innovation at elite departments. Whereas the in-betweeners tend to avoid excessively innovative research, for top universities we see a picture being drawn of a culture that embraces the risk of engaging in new topics or using new methods as "the most fun part," as one researcher puts it. He goes on, stating: "It's the creative side of thinking of new ideas that no one else has done before, that's the exciting thing." The major concern which is addressed by the elite group is

in line with this rather positive perception, namely the fear of being perceived as being not innovative enough and to seeming old-fashioned, i.e., adhering too closely to "normal" science.

Similarly, the interviewees from elite universities articulate a positive perception of the competition in the academic field. This, for instance, becomes apparent in one professor's reported understanding of grant writing as an "art"; he frames it as a learning experience rather than displaying stress or anxiety narratives when talking about applications for third-party funding. Other interviews from elite institutions' members reveal a tendency to aestheticize and naturalize stress and to frame it as a "normal" and "productive" element of their occupation. Overall, these statements indicate that decreasing autonomy and the transformed hierarchy of research paradigms are not (yet) ingrained in their everyday lives to the same extent as it is for in-betweeners.

The PhDs' interviews reveal relatively positive attitudes in the upper echelon of the field, with fear rarely mentioned or even implied when it comes to their academic futures. When asked about his perspectives within the academic field, one PhD student describes the prospects of becoming a professor as "pretty bad" while seeing himself, however, in a very good position; he explains that he has "better chances than most other people." Moreover, he feels like he has been

> groomed for this sort of R1 research-intensive tenure track, but it is the question, whether I want to take it or not. I feel like the department was sort of parading me around last year because I got this prestigious national fellowship. So that says like "oh, I am ready to be a serious scholar" and my professors are taking me a little more serious, that sort of feeds in to the process of becoming like them. So I think I actually have a pretty good chance.

This account illustrates the young scholar's perception of the field as competitive—however, he also acknowledges his position within its structure. His privileged position and the support of faculty, it seems, prevent him from developing existential fears, as he has a variety of options. This positive stance is partly the result of the objective conditions in elite departments. For example, we also find narratives at elite departments describing "some pressure to finish faster." However, the situation and how it is framed differs considerably from what we learned from the in-betweeners. While they report very high levels of pressure to finish their PhDs in a shorter period of time, and feel constantly observed and controlled, the elite PhD students' interviews indicate a rather relaxed attitude. A PhD candidate from one of the elite departments we analyzed reports that the department has a tradition and is in a position to allow their PhD students to take more time to graduate. Although there are attempts by the administration "to get people in all departments to finish on time," especially experienced faculty "are sort of more relaxed about it." Hence, the situation for the elite is different when compared to the in-betweeners: Their privileged position within the university hierarchy still allows them to express a "taking-longer mentality," which results in barely any pressure or stress, let alone widespread *fear* for PhD students.

Notably, these objective conditions are accompanied by a culture that differs from the previous case. Not competing for scarce funding or for positive evaluations of one's identity—in contrast to in-betweeners—elite students are in a position to develop a strong sense of belonging and to enjoy a generally collegial atmosphere.

This might be one reason why metrification, changing academic culture, and increasing material inequalities threaten the elite to a much lesser extent, which corresponds to the scarce occurrences of expressions of fear in interviews conducted in the upper echelon of the field.

Just like the midranking group, elite students are aware of their professors' attention. But these students unanimously frame their relationships to their supervisors in positive terms. They report close bonds and being strongly supported, rather than being controlled and observed. This resulting strong sense of belonging, among both colleagues and supervisors, reduces the risk of experiencing fear (Jones-White et al. 2021). In summary, the elite students' situation is, to a large extent, characterized by secure funding, high bargaining power, a certain self-confidence, and a pleasant working atmosphere, which shields them from developing all-too existential fears.

Against this background, the fear-related translation mechanism described for the in-betweener institutions does not materialize in the elite university members' accounts, which indicates several aspects: In comparison with the in-betweeners, elite faculty members seem to be quite autonomous, due to their strong structural position and role in the overall scientific field. The administration has limited power over professors and graduate students, as they might—with their considerable bargaining power—simply apply to work for other prestigious institutions. Consequently, being aware of these potential losses, the administration avoids actively "handing down" their risk-logics and expectations to faculty and intervening in faculty affairs. Furthermore, in contrast to in-betweener universities, the pressures of academic capitalism and the professors' worries are *not* translated to the PhD candidates; instead, these are reflected as the department's responsibility to improve, and can even engender proactive behaviors to improve their situations and protect them, to a certain degree, from the effects of intensifying competition. According to the professors' accounts, PhD students are certainly not perceived as fearful protégés and potential objects of control and concern, but usually as self-confident. Some PhDs even report the feeling of being paraded around, as seen in the quote above. On top of that, the students' achievements and behavior are not translated into quantified indicators, but qualitative components such as creativity; these are the characteristics that may determine their university career.

Consequently, as the fierce competition of the scientific field, perceived as risk by the administration, is *not translated* into professors' concerns, and thus not into students' fears—and, as such, neither is their behavior critically observed and transformed into quantified indicators, nor is their academic culture subject to comparable change—the intra-institutional mechanism of fear cannot be reconstructed for elite universities: The deteriorating effects of metrification are not transferred to the level of students' emotions, nor do their emotional performances seem to be subject to marketization in the observations of professors and the university system.

The Bottom Position: The Dominated

Although increasing stratification, intensified competition, and metrification are not absent at the dominated position of the institutional hierarchy—and even if

they could be considered sources of fear—academic capitalism manifests in a quite different way here. As the interview material evinces, it is the administrations from dominated institutions who articulate their interests in moving up in rankings, much as their colleagues from midranking universities do. One professor describes how the administration organizes committees to develop "strategies for faculty hires," where "they [his administration] made this strategic plan to move up." Another interviewee reports on his administration's desire to improve their institution's position in rankings: "[our university] has a big push to get people to get grants, and in fact, the administration has been showing up at faculty meetings and basically saying "get grants" at departments that traditionally had not done much." Based on a semantics of "chances" and "opportunities" rather than one of risks, administrations from the lower echelon of the field attempt to interfere in what is usually the faculties' business, so as to initiate a change in organizational culture.

On the faculty level, this interest does not go unnoticed. One professor mentions, quite critically, how his university—as a new potential revenue stream —"pushes patents now" in order to "improve in those rankings." However, the professors' narratives indicate that this expectation is not translated into a particular form of stress or emotional distress. Another professor states that "research that brings in dollars" may be important, but he also makes clear that he does not actually experience the pressure to react accordingly. A colleague of his details: "We are highly encouraged to, it kind of boils down to any kind of review, where we get points for certain activities. I do it [apply for external funding], but I don't have to."

Another professor views third-party funding as something that is appreciated by her faculty as "a good thing," adding however that the quest for external resources does not have the status of an obligation at all. An assistant professor, when obtaining her PhD at an in-between department, felt "nervous about the administration's focus on rankings." In contrast, she experiences her new, less prestigious university as a "comfortable place" without "pressure on any of us." Rather like the elite, professors from the dominated institutional position emphasize the "collegial and relaxed atmosphere" at their departments, as one respondent formulates it. Such statements suggest that academic capitalism has not transformed the everyday academic culture in the same problematic way as described for those from the middle position of the field. Instead, scientific culture is associated by interviewees with a healthy work-life balance. One professor describes it like this:

> At those other schools, at the top schools there is much more of a sacrifice of a work-life balance that you have to undertake. [...] But my sense was that they were working constantly [...]. So one thing that I like about teaching at a school like this one, [...] still a Research 1 school but not with the kind of atmosphere that you might find at [the elite], is that I have my evenings relatively free.

This statement not only indicates how important a positive work–life balance is for him personally, but it also emphasizes the relevance of work–life balance as an element of dominated departments' atmosphere and culture. If anything, the professors here are not concerned that their students are not performing appropriately, but they may worry that they will not have a good work–life balance.

Even those graduate students we interviewed who do express a certain level of pressure articulate relatively optimistic attitudes, that is, that they will "manage their situation"—and while doing so, they do not frame their situation in the realm of fears as the case for in-betweener students. Also, these students, again in contrast to their counterparts from the other university types, explicitly emphasize the importance of personally having a positive work–life balance, and also express their appreciation for the corresponding overall culture.

Much as we have encountered at the in-betweener institutions, some PhD students do report feeling and perceiving an impact of their department's problematic financial situation rooted in increasing material inequalities. One student reports that her department admitted a lot more PhD candidates to increase graduation rates, which at the same time decreased the funding available for each individual graduate student. However, concerning these seemingly identical sources of fear, we find a clear difference to their counterparts from in-betweener universities. Again and again, interviewees at less prestigious institutions explain that they feel little to no competition among their cohorts and a strong sense of belonging among their peers. This is particularly evident in the comparison made by one student: While he depicts a highly relaxing atmosphere at his department, he reports extreme competition at a friend's in-between institution, "where they wouldn't tell each other what projects they were working on." In contrast, he emphasizes that "at least here among the students it doesn't seem very competitive at all." All these narratives imply that, even though we do find a more strained financial situation and decreasing funding opportunities at graduate schools of non-elite institutions, rising material inequality and intensified competition do not manifest, and are not translated into fears, within dominated departments.

This limited relevance of competition for dominated universities is also reflected in the PhDs' descriptions of their scientific practices. In contrast to the in-betweeners, these respondents' accounts do not attest to orienting themselves to the elite's standards and contemporary, state of the art research topics or methods. One of the scholars describes how topics with an applied orientation are "better funded areas," which is "part of the reason" he chose his specific research field. In his answer, he goes on to highlight the importance of having a practical, real-world impact, which is why he wants to work on "real" problems and conduct research that "might end up being useful." In fact, PhDs from dominated institutions tend to repeatedly emphasize the importance of being connected to the "real world." This active interest in the extra-academic world not only corresponds to a certain aversion or indifference regarding publishing or presenting their findings to the academic community but also indicates a persistently stable degree of heteronomy over time. This is because their focus on field-externally relevant research topics is not a new phenomenon at institutions at the lower echelon of the field. This suggests that academic capitalism has not considerably affected their autonomy. In the same way, they are also not affected by a transformation of the field's paradigmatic structure, since research paradigms do not play a significant role at these institutions.

Nevertheless, one specific concern can be identified in these accounts: of ending up "caught up in our ivory tower," conducting research that produces "knowledge for the sake of knowing." One of the PhD students explicitly articulates that she

intends to avoid staying "in a place like this," that is, in academia. She would prefer a future position as professor at a non-Research 1 institution, where she could enjoy a balance between teaching, academic service and publications, and personal life. As she explains, she does not want to "spend all this time until I'm like forty, working from the time I get up till the time I go to bed and neglect things like my family or my, like, personal goals." Likewise, another PhD student describes his concerns of having "that sort of career where you are working until absolute exhaustion" as he has "hobbies and a social life" and wants "to keep having those things," to "put research out" without driving "myself crazy trying." In this logic of valuing free time and avoiding emotional distress, for these PhDs, leisure situations spent together are not a source of additional uncertainty in which the logic of scientific comparison and scientific performance operates in the guise of informality. Thus, for these students, the norms of the academic field are less relevant. Often, they seek fulfillment outside of work or in fields that are not particularly prestigious and thus not very contested. Graduates exhibit less fear (e.g., regarding receiving tenure in their future careers, as the goals of their universities are less demanding) and they are thereby considerably less likely to experience science-specific fears. Their narratives show that dominated institution students have a high chance of developing a certain resiliency to the emotional interpenetration created by academic capitalism and are less emotionally affected by the academic field. This makes them less the object of emotional assessment by professors and the administration. Not being fit for competition in the academic field is perceived by professors and other PhDs not as a personal weakness, but rather attributed to the situation of a dominated institution, and framed positively as fitting in more with the real world (applied research and work–life balance).

This standard also attests to a high relative autonomy of the faculty, which is similar to the one of the elite, albeit for different structural reasons. The professors' accounts do show that they also face expectations from their administrations, yet they pay less attention to them than their midranking counterparts. One professor reports: "There are so many five-year plans and the like that are handed down from the provost in an effort to move [this university] up [. . .]. It usually has some ridiculous title like 'striving for excellence.'" This quote exemplifies the way specific expectations are "handed down" from the university's administration, but equally that the dominated faculty tends not to take them too seriously.

In contrast to in-betweeners, the institutional, cultural, and structural conditions within dominated universities hinder a close entanglement of fear and stratification: Professors are less under control by the administration (cp. Paradeise and Thoenig 2013), whose expectations are often without consequences. Instead of increasingly observing and controlling their students' publishing behavior, the dominated faculty seems not to classify this as relevant for themselves or their students. Like for the elite, metrification is not, or only to a non-significant extent, passed on from the professors to graduate students. In this way, their emotions are not subject to marketization in the observations of professors and administration, and are not retranslated into quantified indicators. Therefore, for the universities with dominated positions in the field, we do not detect the intra-institutional mechanism of fear.

Inter-Institutional Mechanisms

So far, we have discussed different university types as defined by their respective individual hierarchical positions. Yet, the interplay of the sciences' social structuration, and fear in its different manifestations, does not end at each university's borders—it can equally be part of the relations between the different positions in the academic field.

Take the example of the following personal encounter described by a PhD student from the elite group: At one of the most prestigious sociology conferences, this respondent himself from a highly ranked university, "happened to be sitting next to some graduate students from some small university in Texas." As soon as these PhD students recognized the institution from the elite student's nametag, they "quieted down like 'oh, you are from a different class than we are, we are not going to talk to you.'" The elite PhD student emphasizes that "they got really quiet" although it was not his intention to "shut them down," and that his academic origin it is not his "fault," just as it is not theirs that their "university is ranked lower." He adds that "people do not really know what the [ranking] numbers are" but that they do have a sense of them and their own places in this hierarchy. He underlines his own awareness of the hierarchy and its effects, a hierarchy he strongly objects to but equally "clearly benefits [from], in ways that [he] can't even imagine." From the other side of the ranking spectrum, another PhD candidate reports disliking conferences; she specifically tries to avoid the most prestigious ones in her field, having heard from peers who attend them that "people just look at your nametag, and if you're not from one of those schools, they don't want to talk to you. [. . .] So, I don't like conferences that much." This situation describes how scholars from differently classified institutions have a sense of the positions they occupy in the field's hierarchy, and how these positions make them not only perceive and judge seemingly objective academic situations differently: This conference example of two encountering scientists, where in fact two habitus meet, shaped in part by their respective organizations, also illustrates how growing stratification and metrification take effect on the level of "mere" institutional classification, even if one is not entering any form of personal dialogue. In addition, we observe that fears are also very likely to be transmitted via hearsay, being passed on from a colleague's immediate experience.

Viewed from the outside, the two scholars find themselves in the same situation, one in which ideally the better argument (Merton 1942) is at stake. However, the situation is objectively hierarchized by their respective subjective sensations—relaxedness on the one side and tenseness on the other. The inter-institutional role of fear comes to the fore in the context of immediate face-to-face encounters: Fear is expressed as a relation in the direct encounter between actors from universities of different stature. The PhDs from less reputed institutions often report forgoing attending prestigious academic conferences, a practice that saves them from (identity) threatening situations in which their status as representatives of a marginal institution might become tangible. In contrast to the dominated PhDs' fear-rooted practices of academic self-exclusion, elite students and professors do not avoid formal and informal academic situations. They are repeatedly portrayed by in-betweeners

and scholars from less reputed institutions as "big egos" with a habitus that embraces, perhaps even relishes confrontations while exhibiting casualness.

Nevertheless, face-to-face encounters are merely indicative for the broader structural interrelations between the representatives from different institutions. Beyond these more *immediate* relations, the interview material also indicates more *mediated relations* of power and fear between representatives from the different university types. For example, scholars from the various kinds of university exhibit *different affective relations to the academic (job) market*. For some, again, avoidance practices are visible in our material: The PhDs from dominated institutions evaluate and experience elite positions as unattainable so that they "wouldn't even apply" to elite institutions in order to avoid hurtful experiences. For respondents from elite universities, in contrast, applying for an elite institution is an entirely natural thing to do. Their accounts support our interpretation that academic capitalism has not dramatically changed the degree of competition at the extreme positions of the academic hierarchy: While the elite has always been subjected to intense competition which is engrained in their scholars' habitus, the dominated are in a structurally induced position to refrain from severe forms of competition. Similarly, different stances may also exist toward applications for *academic prizes and other selective committees* in the field. The difference between either actively embracing or skeptically dismissing career opportunities can contribute to the further consolidation of the field's hierarchy. Furthermore, our observations in the intra-group context of in-between universities can be said to be effective between the universities as well: If an actor is too reluctant to apply for a position, it is perceived as their personal decision, and perhaps the result of an intrinsic trait, rather than it being ascribed to the structure of the field. Different *practices of networking with important figures* is another example that is related, in a more mediated way, to the different positions in the field and their corresponding absence and presence of fears. In contrast to the rather hesitant behavior and evasive practices of actors from non-elite institutions, representatives from elite scholars are usually not too shy, or even anxious, to reach out to the most prominent scholars within their fields. Again, the different affective stances toward establishing important networks can have far-reaching consequences for young scholars' academic futures. But even more generally, the ways scholars from different institutions approach *the scientific community* can also mediate between the different positions and the corresponding affective states. While scholars from midranking universities sometimes fear that their work is not "relevant" or "good enough" to share it with their peers, elite scholars often use numerous channels (such as email lists or social media) to informally distribute their most recent findings and to put them up for discussion within the scientific community.

An example of more immediate relations is how the *different selection of research topics* can establish and reproduce structural relations between the representatives of the different field positions. As respondents from in-betweener universities report, they often feel pushed to orient themselves toward the current state of the art. Yet, according to the strategies of their concerned administrations, which can only identify actual innovations with a time lag, innovative research is effectively defined via currently visible publications. At the same time, however, researchers (and their administrations) from in-betweener universities are rather reluctant to

engage in actual innovation, and, by aiming today for what was innovative yesterday, they unintendedly produce "normal science." Contrary to this implicit fear of innovation, elite scholars, concerned as they are about appearing mundane, tend to shy away from the mere reproduction of ostensibly normal science. Here, the middle position seems to serve as a reference for the elite, whose members strive for "cutting-edge research" and in doing so distinguish themselves in particular from a scientific "middle class" rather than from completely marginalized positions. Conducting research at an elite university can even mean deliberately pursuing inherently "insecure" research, which can lead to scientific outcomes that are then seen as innovative in the field.

In summary, such practices—ranging from more immediate to far-reaching, mediate ones—are anything but independent from fears, which are created, shaped, and impeded in numerous ways by the relational structure that prevails between the universities and their actors. Thus, apart from and in addition to phenomena within the respective universities, various inter-institutional phenomena—that is, in this case, mechanisms of fear induction and fear prevention—between different positions in the field can be observed and, in doing so, we can apprehend the field's structural relations as academic "fear relations." In a number of manifest and latent ways, it seems to us that, in light of our analyses, fear relations can contribute to the reproduction and transformation of academic and scientific hierarchies.

CONCLUSION: SYMBOLIC DOMINATION AND FEAR IN ACADEMIA

Within academia, but even more often outside it, science has traditionally been conceived of as a highly rational endeavor. However, the social logic of scientific practice—and even more so considering recent transformations of the academic field—harbors numerous gateways for emotions and affects. In this article, we built on knowledge from the sociology of science and from higher education research, mobilizing the sociology of fear in the context of field theory to establish the constitutive role this emotion and affect plays in the structuration of the contemporary (US) academic field.

While research to date has developed differentiated account of emotions in science (Bloch 2012; Chubb et al. 2017; Naidoo 2018), fears have not been examined in the same differentiated way. Based on our empirical material, we develop an empirically grounded theoretical perspective on the role of fear in US academia in times of academic capitalism. Overall, our findings indicate that the presence or absence of fear, as well as the form it takes, can contribute to the structuration of the modern academic self, its social practices, and ultimately the structure of the academic field. We established two sets of mechanisms—intra- and inter-institutional ones—to illustrate how fear as a purportedly individual trait is involved in the (re)production of the field's structural hierarchy. The first type of mechanisms, *intra-institutional mechanisms*, describes the systematic relation between power structures and fears within universities. For universities in the middle of the field's hierarchy (in-betweener institutions), those that are affected by academic capitalism the most, we identify a mechanism of fear-related translation and retranslation. We find an

effective translation of structural forces into perceived risks, concerns, and fears—from a university's administration, to professors, to PhD students. Also, reflecting the specific situation of these midranking institutions, this affective chain of subjectification is accompanied by a retranslation of fears, leading to an objectification of the PhD students' emotions up to the administrational level. At the other two university types, these translation chains do not prevail. In case of elite universities, their relatively strong autonomy inhibits the transmission and translation of those risks perceived by the administration to professors' concerns, and consequently their concerns to their students' fears, just as it can prevent the retranslation of students' fear all the way back up the organizational hierarchy. This is not least the case because of the top students' elite habitus, which corresponds to the nomos of the academic field. Within universities of the lower echelon of the field, it is their heteronomous position —which implies a weak appropriation by the forces of the academic field, resulting in a weaker manifestation of the libidinal object-cathexis—that hinders the translation and retranslation of fears through the ranks of the university.

Beyond the processes we reconstructed within universities, we also identify phenomena that differ between the different university types and that overall reveal a plurality of *inter-institutional mechanisms*. Perhaps more than before, in the overarching context of academic capitalism, we find a differential distribution of risks, concerns, and fears in contemporary science (e.g., compare Chubb et al. 2017 for the UK and Australia); as such, an actor's position in the organizational hierarchy and in the organizational field essentially influences whether their own situation is more likely to be perceived as fear, ethical concern, or rational risk. In manifold ways, fear can stem from scholars' and institutions' positions in the field's hierarchy, just as it can contribute to inequality relations between universities and their representatives: from more immediate situations of personal encounter, which are experienced differently by the different scholars, to constellations that are highly mediated, such as the different scholars' different relations to networking strategies, research topics, or the academic audience.

We adopted habitus-field theory, which enabled us to look in detail at the relation between power structures and emotional structures and thus to reconstruct how both mutually influence each other. In doing so, this perspective sheds light on the symbolic economy of the scientific field, revealing how academic categories (such as categories of excellence) are closely entangled with emotional categories, and how scholars' fears become part of relations of symbolic domination. Fear, its legitimate expression, and its ascription vary to a certain extent by the position occupied in the field's hierarchical structure. The concept of symbolic domination sheds light on the ways in which some scholars' perceptual categories and feelings are subtly, yet powerfully influenced, and how the underlying power relations are simultaneously naturalized and subjectivized. Taken together, fear in its different forms can contribute to science's intra- and inter-institutional structuration, as it reinforces and legitimizes the hierarchies (see also Weinstein et al. 2019:83) within and between human actors (scholars) and institutional actors (universities).

However, these relationships have undergone a drastic intensification in the course of the developments of academic capitalism: The decreased autonomy of the sciences implies increased access to and leverage over scientists, right down to their

emotions, which, however, is realized to different extents at different positions of the field. An important element of this increased influence is metrification, which serves as a legitimate reference for objective evaluation, thereby not only causing perceptions of risk, concerns, and fears, but also evaluating such affects, which become thus part of the metrification process itself. The already fierce level of competition among scholars is considerably intensified by the increased visibility of other scientists within the unified metric reference system, which begins in the first stages of their academic careers (Nature 2019), making it difficult for many to escape the evaluation imperatives of the field and thus to shield their innermost identity. This culture of "competitive accountability" even transcends Gewin's (2021:490) critique that scholars' need to "objectively" conform to "narrow" concepts of excellence. Our contribution attests to the role of the informal aspects of this connection, that is, to the fearful dimension of excellence. As part of this culture, subjected to the imperatives of everyday scientific life, those scholars who cannot conform to these "excellent" standards blame themselves instead of blaming the system. In doing so, they fundamentally contribute to the legitimization of the current state of science. To counteract this, administrators, who often may also suffer from the effects of academic capitalism, should proactively use their power to change these structures. For example, in an effort to mitigate the negative effects of evaluations, there have been departmental programs implemented (for instance) in the UK which have been shown to create a positive atmosphere for scientists and contribute to their well-being (Weinstein et al. 2021:155), with the concomitant potential to positively influence their emotions.

Fear is often understood as a distinctly anti-rational emotion on the individual level; as it turns out, however, it is not all contradictory to the overall processes of rationalization inherent to academic capitalism. On the contrary—the rationalizing pressure of academic capitalism and the emergence of fearful dispositions can be seen, to a considerable extent, to be co-constitutive. Our findings give rise to concerns in a number of ways. First, some scholars might not decide to stay in academia, and "choose" less stressful career paths (as numbers of those who continue an academic career are already decreasing: 49% in 2000, 40% in 2020; compare NSF 2020). This might be the case, in particular, for those who already enter the scientific field from a marginalized position, for example, because of their race, gender, class, and/or disability (cp. Brown and Leigh 2018). For instance, less than one-third of all PhDs is awarded to first-generation students and only a minority of them become faculty members (Lee 2017:202; NSF 2020). In light of our findings, future research should examine the role of social origin—that is, the ways in which certain fears (or their absence) are already extant as dispositions or predispositions; and whether academic capitalism will increase the high selectivity of social origin and how this is connected to habitus. Similarly, the role of gendered (academic) socialization should be taken up by future studies, as this can be expected to take effect in a scholar's habitus and thus in their predisposition for experiencing fears (Münch 2016:24).

Second, to the extent that specific groups of scholars preclude themselves from the academic field, and when those who do choose an academic career deliberately avoid innovative research, science, in the long run, may struggle to maintain the dynamic, vigorous production of knowledge (Münch 2014:18). Thus, future research should first

and foremost study the consequences of modern academic culture being structured by fear relations: Are there consequences for research decisions, for example, publication strategies and choices of method? Does the culture of academic capitalism scare off potential young scientists? In addition, for those who stay in the scientific field, how does fear in its different manifestations affect scholars' mental and physical health? Even though fear is doubtless a powerful emotion, it is certainly not the only one that can be relevant for the transformation and perpetuation of academic hierarchies. Thus, future research should also study how other emotions, such as envy, are involved in the objective production and transformation of contemporary science.

In our current analysis, we focused on general developments in the scientific field and found, for the most part, remarkably similar patterns regardless of the specific discipline. However, in our analysis of the material, we also came across differences between the different disciplines. For instance, while some parts of the sociological elite see obtaining external money as "getting your hands dirty," as it is associated with applied research, and thus seems to be triggered by the fear of being perceived as non-elite, chemists from all types of institutions have no choice but to continually apply for third-party funds, constantly in fear that they might not be able to sustain their research groups long term. Another example for disciplinary differences is the work–life balance narrative: While we found explicit statements on the importance of a positive work–life balance in the case of dominated sociologists, these were absent, at least in manifest form, in our interviews with chemists, which indicates that a notably different work ethos is customary in the field of chemistry. Further research should go into more detail concerning such differences between academic disciplines and analyze how fears are involved in the structuration of the different scientific fields, and in the (re)production of the hierarchical order between the disciplines. Finally, but equally importantly, in doing so, the issue of different national scientific fields and their interrelation should be investigated.

The issue of legitimacy that came to the fore in our analyses motivates another core aspect for further research: Whereas qualitative interviews allowed us to identify how fear and hierarchical structure interact in the academic field, further research should also extend the legitimacy aspect to the realm of reflexive methodology. For example, one may well expect certain forms of fear to exist in privileged positions too, but that respondents from such institutions are unlikely to actually verbalize them. To tackle this issue, in-depth interviews and group interviews might be helpful in identifying more latent and less explicit fears. Perhaps counterintuitively, and yet fundamentally, the reflexive endeavor of examining the non-rational elements of science—which starts with scientists themselves admitting to being equally as affected by emotions as by the idea of scientific rationality—is a crucial step toward the possibility of scientific rationality, not least in a time of exogenous rationalization that often enough manifests in de-rationalization.

REFERENCES

Ahmed, Sara. 2014. *The Cultural Politics of Emotion*. Edinburgh: Edinburgh University Press.
Altbach, Philip. 2006. "The Dilemmas of Ranking." *International Higher Education* 42: 1: 2–3.

Altheide, David L. 2009. *Terror Post 9/11 and the Media*. New York: Peter Lang.

Baier, Christian and Andreas Schmitz. 2019. "Organizational Environments and Field Theory: The Example of the Field of German Universities 2002–2014," In Jörg Blasius, Frédéric Lebaron, Brigitte Le Roux, and Andreas Schmitz (eds.), *Empirical Investigations of Social Space*: pp. 305–322. Cham: Springer.

Ball, Stephen. 2021. "The Making of a Neoliberal Academic." *Research in Teacher Education* 11: 1: 15–17.

Beard, Colin, Sue Clegg, and Karen Smith. 2007. "Acknowledging the Affective in Higher Education." *British Educational Research Journal* 33: 2: 235–252.

Berg, Lawrence D., Edward H. Huijbens, and Henrik Gutzon Larsen. 2016. "Producing Anxiety in the Neoliberal University." *The Canadian Geographer* 60: 2: 168–180.

Beyer, Stephanie. 2021. *The Social Construction of the US Academic Elite: A Mixed Methods Study of Two Disciplines*. London/New York: Routledge.

Bloch, Charlotte. 2012. *Passion and Paranoia: Emotions and the Culture of Emotion in Academia*. Burlington, VT: Ashgate.

Bourdieu, Pierre. 1985. "The Social Space and the Genesis of Groups." *Theory and Society* 14: 6: 723–744.

Bourdieu, Pierre. 2000. *Pascalian Meditations*. Stanford, CA: Stanford University Press.

Bourdieu, Pierre. 2001. *Masculine Domination*. Cambridge: Polity.

Bourdieu, Pierre. 2004. *Science of Science and Reflexivity*. Chicago, IL: Chicago University Press.

Brown, Nicole and Jennifer Leigh. 2018. "Ableism in Academia: Where Are the Disabled and Ill Academics?" *Disability & Society* 33: 6: 985–989.

Brunila, Kristiina and Paola Valero. 2018. "Anxiety and the Making of Research(ing) Subjects in Neoliberal Academia." *Subjectivity* 11: 1: 74–89.

Cardew, Gail. 2020. "People Will Not Trust Unkind Science." *Nature* 578: 7793: 9.

Cho, Seongkyung and Christopher S. Hayter. 2020. "Under Pressure: A Systematic Review of Stress and its Impact Among Graduate Students." *Science and Public Policy* 47: 6: 758–771.

Chubb, Jennifer, Richard Watermeyer, and Paul Wakeling. 2017. "Fear and Loathing in the Academy?: The Role of Emotion in Response to an Impact Agenda in the UK and Australia." *Higher Education Research and Development* 36: 3: 555–568.

Clegg, Sue. 2013. "The Space of Academia: Privilege, Agency and the Erasure of Affect," In Claire Maxwell and Peter Aggleton (eds.), *Privilege, Agency and Affect: Understanding the Production and Effects of Action*: pp. 71–87. London: Palgrave Macmillan UK.

Davies, Scott and David Zarifa. 2012. "The Stratification of Universities: Structural Inequality in Canada and the United States." *Research in Social Stratification and Mobility* 30: 2: 143–158.

Devereux, George. 1967. *From Anxiety to Method in the Behavioral Sciences*. Paris: Mouton.

Espeland, Wendy. 2016. "Reverse Engineering and Emotional Attachments as Mechanisms Mediating the Effects of Quantification." *Historical Social Research/Historische Sozialforschung* 41: 2: 280–304.

Espeland, Wendy Nelson and Michael Sauder. 2016. *Engines of Anxiety: Academic Rankings, Reputation, and Accountability*. New York: Russell Sage Foundation.

Evans, Teresa M., Lindsay Bira, Jazmin Beltran Gastelum, L. Todd Weiss, and Nathan L. Vanderford. 2018. "Evidence for a Mental Health Crisis in Graduate Education." *Nature Biotechnology* 36: 3: 282–284.

Finkelstein, Martin J., Valerie Martin Conley, and Jack H. Schuster. 2016. *The Faculty Factor: Reassessing the American Academy in a Turbulent Era*. Baltimore, MD: Johns Hopkins University Press.

Gengnagel, Vincent and Andreas Schmitz. 2018. "Zur Gesellschaftlichen Positioniertheit und Legitimität der Angst," In Sigrid Betzelt and Ingo Bode (eds.), *Angst Im Neuen Wohlfahrtsstaat*: pp. 55–74. Baden-Baden: Nomos.

Gewin, Virginia. 2021. "Pandemic Burnout Is Rampant in Academia." *Nature* 591: 7850: 489–491.

Gill, Rosalind. 2016. "Breaking the Silence: The Hidden Injuries of Neo-Liberal Academia." *Feministische Studien* 34: 1: 39–55.

Ginsberg, Benjamin. 2011. *The Fall of the Faculty*. Oxford: Oxford University Press.

Gonzales, Leslie D., Edna Martinez, and Chinasa Ordu. 2014. "Exploring Faculty Experiences in a Striving University Through the Lens of Academic Capitalism." *Studies in Higher Education* 39: 7: 1097–1115.

Hamann, Julian. 2018. "The Production of Research Elites: Research Performance Assessment in the United Kingdom," In Roland Bloch, Alexander Mitterle, Catherine Paradeise, and Tobias Peter (eds.), *Universities and the Production of Elites*: pp. 175–199. Cham: Springer.

Hazelkorn, Ellen. 2011. *Rankings and the Reshaping of Higher Education: The Battle for World-Class Excellence*. New York: Palgrave Macmillan.

Hermanowicz, Joseph C. 2009. *Lives in Science how Institutions Affect Academic Careers*. Chicago: University of Chicago Press.

Holland, Charlotte, Francesca Lorenzi, and Tony Hall. 2016. "Performance Anxiety in Academia: Tensions Within Research Assessment Exercises in an Age of Austerity." *Policy Futures in Education* 14: 8: 1101–1116.

Holtz, Peter, Emanuel Deutschmann, and Henrik Dobewall. 2017. "Cross-Cultural Psychology and the Rise of Academic Capitalism: Linguistic Changes in CCR and JCCP Articles, 1970–2014." *Journal of Cross-Cultural Psychology* 48: 9: 1410–1431.

Jones-White, Daniel R., Krista M. Soria, Erin K.B. Tower, and Olena G. Horner. 2021. "Factors Associated with Anxiety and Depression Among U.S. Doctoral Students: Evidence from the GradSERU Survey." *Journal of American College Health* 70: 8: 2433–2444.

Kempner, Joanna. 2020. "Post-Truth and the Production of Ignorance." *Sociological Forum* 35: 1: 234–240.

Lashuel, Hilal A. 2020. "The Busy Lives of Academics Have Hidden Costs - and Universities Must Take Better Care of Their Faculty Members." *Nature Careers Community*. https://doi.org/10.1038/d41586-020-00661-w

Lee, Elizabeth M. 2017. ""Where People Like Me Don't Belong": Faculty Members from Low-Socioeconomic-Status Backgrounds." *Sociology of Education* 90: 3: 197–212.

Loveday, Vik. 2018. "The Neurotic Academic: Anxiety, Casualisation, and Governance in the Neoliberalising University." *Journal of Cultural Economy* 11: 2: 154–166.

Marginson, Simon and Marijk van der Wende. 2007. "To Rank or to Be Ranked: The Impact of Global Rankings in Higher Education." *Journal of Studies in International Education* 11: 3–4: 306–329.

Martínez-Nicolás, Israel and Jorge García-Girón. 2021. "'No Future for You': Economic and Mental Health Risks in Young Spanish Researchers," In Deborah L. Mulligan and Patrick Alan Danaher (eds.), *Researchers at Risk*: pp. 103–114. Cham: Springer.

Mendoza, Pilar, Aaron M. Kuntz, and Joseph B. Berger. 2012. "Bourdieu and Academic Capitalism: Faculty 'Habitus' in Materials Science and Engineering." *The Journal of Higher Education* 83: 4: 558–581.

Merton, Robert K. 1942. "The Normative Structure of Science," In Robert K. Merton (ed.), *The Sociology of Science*: pp. 267–278. Chicago: University of Chicago Press.

Moran, Helene, Lena Karlin, Elsie Lauchlan, Sarah Rappaport, Ben Bleasdale, Lucy Wild, and Josh Dorr. 2020. "Understanding Research Culture: What Researchers Think About the Culture They Work In." *Wellcome Open Research* 5: 201: 1–32.

Mulcahy, Dianne and Maree Martinussen. 2022. "Affecting Advantage: Class Relations in Contemporary Higher Education." *Critical Studies in Education*. https://doi.org/10.1080/17508487.2022.2055595

Müller, Ruth. 2014. "Racing for What? Anticipation and Acceleration in the Work and Career Practices of Academic Life Science Postdocs." *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 15: 3.

Mulligan, Deborah L. and Patrick Alan Danaher (eds.). 2021. *Researchers at Risk: Precarity, Jeopardy and Uncertainty in Academia*. Cham: Springer Nature.

Münch, Richard. 2014. *Academic Capitalism: Universities in the Global Struggle for Excellence*. New York: Routledge.

Münch, Richard. 2015. "Science in the Hands of Strategic Management: The Metrification of Scientific Work and its Impact on the Evolution of Knowledge," In Isabell M. Welpe, Jutta Wollersheim, Stefanie Ringelhan, and Margit Osterloh (eds.), *Incentives and Performance: Governance of Research Organizations*: pp. 33–48. Cham: Springer.

Münch, Richard. 2016. "Academic Capitalism," In *Oxford Research Encyclopedia of Politics*, accessed September 10, 2022. https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-15

Naidoo, Rajani. 2018. "The Competition Fetish in Higher Education: Shamans, Mind Snares and Consequences." *European Educational Research Journal* 17: 5: 605–620.

Nature Editorial. 2019. "The mental health of PhD researchers demands urgent attention." *Nature* 575: 7782: 257–258.

NSF. 2020. "Survey of Earned Doctorates," accessed August 12, 2022. https://ncses.nsf.gov/pubs/nsf22300/report

Oancea, Alis. 2014. "Research Assessment as Governance Technology in the United Kingdom: Findings from a Survey of RAE 2008 Impacts." *Zeitschrift für Erziehungswissenschaft* 17: 6: 83–110.

O'Meara, KerryAnn. 2007. "Striving for What? Exploring the Pursuit of Prestige," In John C. Smart (ed.), *Higher Education: Handbook of Theory and Research*: pp. 121–179. Dordrecht: Springer Netherlands.

Paradeise, Catherine and Jean-Claude Thoenig. 2013. "Academic Institutions in Search of Quality: Local Orders and Global Standards." *Organization Studies* 34: 2: 189–218.

Peake, Linda J. and Beverley Mullings. 2016. "Critical Reflections on Mental and Emotional Distress in the Academy." *ACME: An International Journal for Critical Geographies* 15: 2: 253–284.

Sabagh, Zaynab, Nathan C. Hall, Alenoush Saroyan, and Sarah-Geneviève Trépanier. 2022. "Occupational Factors and Faculty Well-Being: Investigating the Mediating Role of Need Frustration." *The Journal of Higher Education* 93: 4: 559–584.

Scherer, Mary L. 2020. "Unequally Adrift: How Social Class and College Context Shape Students' Mentorship Experiences." *Sociological Forum* 35: 3: 744–764.

Slaughter, Sheila and Gary Rhoades. 2004. *Academic Capitalism and the New Economy: Markets, State, and Higher Education*. Baltimore, MD: Johns Hopkins University Press.

Smith, Katherine E. 2010. "Research, Policy and Funding - Academic Treadmills and the Squeeze on Intellectual Spaces." *British Journal of Sociology* 61: 1: 176–195.

Strauss, Anselm and Juliet M. Corbin. 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Thousand Oaks: SAGE Publications.

Timmermans, Stefan and Iddo Tavory. 2012. "Theory Construction in Qualitative Research: From Grounded Theory to Abductive Analysis." *Sociological Theory* 30: 3: 167–186.

Tuchman, Gaye. 2009. *Wannabe U: Inside the Corporate University*. Chicago, IL: University of Chicago Press.

Tytherleigh, Michelle, Christine Webb, Cary L. Cooper, and C. Ricketts. 2005. "Occupational Stress in UK Higher Education Institutions: A Comparative Study of all Staff Categories." *Higher Education Research & Development* 24: 1: 41–61.

Watermeyer, Richard. 2019. *Competitive Accountability in Academic Life: The Struggle for Social Impact and Public Legitimacy*. Cheltenham: Edward Elgar Publishing.

Weinstein, Netta, Jennifer A. Chubb, Geoffrey Haddock, and James R. Wilsdon. 2021. "A Conducive Environment? The Role of Need Support in the Higher Education Workplace and its Effect on Academics' Experiences of Research Assessment in the UK." *Higher Education Quarterly* 75: 1: 146–160.

Weinstein, Netta, James Wilsdon, Jennifer Chubb, and Geoff Haddock. 2019. "The Real-Time REF Review: A Pilot Study to Examine the Feasibility of a Longitudinal Evaluation of Perceptions and Attitudes Towards REF 2021," accessed September 22, 2022. https://osf.io/preprints/socarxiv/78aqu/

Wilsdon, James, Liz Allen, Eleonora Belfiore, Philip Campbell, Stephen Curry, Steven Hill, Richard Jones, Roger Kain, Simon Kerridge, Mike Thelwall, Jane Tinkler, Ian Viney, Paul Wouters, Jude Hill, and Ben Johnson. 2015. "The Metric Tide: Report of the Independent Review of the Role of Metrics in Research Assessment and Management." https://doi.org/10.13140/RG.2.1.4929.1363

Wodak, Ruth. 2015. *The Politics of Fear: What Right-Wing Populist Discourses Mean*. London: SAGE Publications.

Woolston, Chris. 2020. "Postdocs Under Pressure: 'Can I Even Do this Any More?'." *Nature* 587: 7835: 689–692.

Wray, Siobhan and Gail Kinman. 2021. "Supporting Staff Wellbeing in Higher Education." Project Report. Education Support, London, accessed September 22 2022. https://eprints.bbk.ac.uk/id/eprint/47038

Yudkevich, Maria, Philip G. Altbach, and Laura Rumbley (eds.). 2016. *The Global Academic Rankings Game: Changing Institutional Policy, Practice and Academic Life*. New York: Routledge.