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The Agency of Scientific Disciplines

Frank Meier*

Abstract: »Die Agency wissenschaftlicher Disziplinen«. This paper discusses the agency of scientific disciplines and reconstructs it as representative agency. In the case of disciplinary representative agency, individual and organizational actors are committed to the *reflexive interests* of a discipline and act on their behalf. This paper explores the essential forms and arenas in which this type of agency is exercised and discusses the relevance of some recent trends in science and higher education for the collective agency of disciplines.

Keywords: Disciplines, science studies, competition.

1. Introduction

Can scientific disciplines act? Do they possess, exhibit, or perform an identifiable form of agency? At first glance, positive answers to these questions seem implausible: science studies treat disciplines primarily as patterns of scientific communication, cultures, or communities (Stichweh 2013; Becher and Trowler 2001; Gläser 2006; Jacobs 2013). They are described as loosely integrated by providing cognitive and normative orientations for autonomously-acting individual scientists. Disciplines do not exercise centralized control over the scientific practices of “their” academics. They are not held accountable for what these academics do. To the extent that centralized control and accountability are considered key elements of “actorhood” (see Meier 2009), disciplines hardly resemble actors in a traditional sense.

This does not, however, preclude the emergence of what I call *representative agency*. In the case of disciplinary collective agency, individual and organizational actors are committed to the legitimate “interests” of a discipline and act on their behalf.

The notion of representative agency can be illuminated more clearly by drawing on conceptual resources from the broader interdisciplinary discussion on collective agency. In this discussion, collective intentions and action

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capability are considered crucial elements of this kind of agency (see Gehring and Marx 2023, the introduction to this special issue).

In this discussion, authors assume that collective agency requires collective intentions or shared goals. Tuomela (2020), for instance, discusses this problem in terms of I- and we-mode reasonings. Margaret Gilbert (1990; 2023, in this special issue) suggests that a commitment to common goals is the basis for acting together, a commitment that is underpinned by obligations and a standing of group members to demand appropriate contributions to the shared goal.

Following these insights, I argue that scientific disciplines may gain collective agency by the commitment of individual and organizational actors to the discipline and its legitimate “interests.” I will spell out what these interests may look like, and I argue that actors are authorized and obliged to be committed to the discipline’s interest, at least if and when they are representing it. Of course, scientists may have various divergent and potentially conflicting commitments, and the empirical question still remains: How much does the commitment to the collective interests of the discipline make a marked difference in relevant actions of individual and organization actors?

Collective action capabilities are a second key element of collective agency. It requires a collective “efficacy” (Hofferberth 2019, 132) that allows a group to make a difference in its environment. As I will argue, disciplinary collective agency is weak in this respect. Disciplines do not control the actions of their members, and they only have limited collective resources (Coleman 1974) at their disposal. However, the difference that representative agency can make is based on individual and organizational actors who do not act *in persona proprio* but as representatives¹ of their discipline. It is precisely that they act and speak in the name of their discipline that members acquire some authority that allows them to be effective agents of their disciplines.

This article addresses the general theoretical question of collective agency. But it also adds to the more specific discussion on the transformation of agency in science and higher education. Here, previous research has focused on the emerging actorhood of university organizations (Krücken and Meier 2006; Meier 2009; Whitley 2012; Thoening and Paradeise 2016; Bloch 2022).² In this context, disciplines were, if considered at all, not seen as entities with potential agency in their own right but rather as a limitation to the organizational agency of the universities.

¹ On individuals representing a group, see also Tuomela 2020.

² It is often overlooked that two entirely different understandings of organizational actorhood co-exist in the literature. The constructivist approach understands actorhood as the discursive institutionalization of an actor model of the university. In this view, the model guides observations as well as the attribution of responsibility. It orientates, motivates, and justifies structural reforms (Krücken and Meier 2006; Meier 2009; Bloch 2022). The realist approach, in contrast, asks to what extent empirical universities structurally possess features associated with actors (Whitley 2012; Thoening and Paradeise 2016).

The article reconstructs the agency of scientific disciplines as representative agency and explores the essential forms and arenas in which this type of agency is exercised. This is a conceptual, not an empirical paper. The aim is not to investigate to what extent disciplinary collective agency exists but to provide a framework for conducting such an investigation. Occasionally I will illustrate my argument with some empirical references, mainly from the German science and higher education system.

I will start by briefly sketching how disciplines are conceptualized in science studies (2). After that, I will address the problem of collective disciplinary intentions by spelling out the idea of disciplinary reflexive interests (3). In the next step, I will discuss the relationship between individual, organizational, and disciplinary interests (4). Then, I will ask who represents disciplines (5). And finally, I will assess the relevance of some major trends in science and higher education for the collective agency of disciplines (6).

2. Scientific Disciplines

Specialization is a fundamental feature of modern science,³ disciplinarity is its primary pattern of internal differentiation (Ben-David 1971; Stichweh 2013; Luhmann 1992). The comparison of disciplines reveals epistemic and social differences (Becher and Trowler 2001; Gläser et al. 2010). Disciplinary boundaries are drawn on different levels: on a cognitive level through concepts, theories, and methods; on a social level as a community of specialists; and on a communicative level through publications that refer to each other (Stichweh 2013). In their scientific practice, however, individual researchers do not only orient themselves to disciplinary boundaries but usually to the more specific communities of their respective specialties (Chubin 1976; Gläser et al. 2010). Indeed, epistemic cultures (Knorr Cetina 1999) may transcend the boundaries of established disciplines.

The scientific community, then, is, in fact a complex network of multiple communities. Within these communities, the production of scientific knowledge is based on highly autonomous decisions by individual researchers concerning research topics and research questions, theories, and methods. Coordination is based on references to a shared knowledge base, motivated by the reputational gains (and the monetary gains that may come with it) that can be expected for contributions that are considered valuable by peers (Gläser 2006).

While the orientation towards specialties is quite complex and fluid in individual scientists' research practices, disciplinarity is a central structural

³ Throughout this text, science will be understood broadly as "Wissenschaft," including social sciences, engineering, arts, and humanities.

principle not only for the university as a core organization of the science system (not least because of the organization of teaching) and for the organizational self-government of science, but also for funding organizations. As a consequence, disciplines remain highly important for academic careers.

Disciplines are fundamentally non-hierarchical. To be sure, scientific disciplines do exhibit a status system generated via the reputation mechanism, as science studies already showed in its early days (Merton 1968; Zuckerman 1970; Merton and Zuckerman 1971). Status differences are significant for the internal operations of disciplines. They lead to very unequal opportunities for both individual scientists and scientific organizations. Competition for reputation and status drives scientific development. But status differences do not give rise to powers to give directives or to subject lower-status scientists to binding decisions on truth claims, theories, and methods.⁴

To sum up, the picture that emerges here does not seem to be favorable for collective agency. There are no clear-cut boundaries, there is no centralized control, only loose integration over rules and highly abstract and ambiguous substantial goals (like the advancement of scientific knowledge), and only limited autonomy in relation to universities and funding agencies. Under these conditions, collective disciplinary agency, I argue, is first and foremost representative agency.

3. Collective Intentions: Reflexive Interests

Representative agency is neither about the centralized control of a collectivity nor about accountability but about speaking and acting in the name of the interests of that collectivity. Individual actors and organizations engage in representative agency as far as they act as representatives of collective interests. This, of course, presupposes that something like a collective interest can be identified, interests that cannot be reduced to individual or organizational interests. But what could a collective interest of a scientific discipline look like?

A helpful tool that allows us to answer this question was suggested by Uwe Schimank (1992), with his concept of “reflexive interests.” Formally, these interests are fictions that actors use when they are forming expectations about the actions of other actors – both individual and organizational – they have limited information about. As a heuristic, Schimank claims, actors attribute reflexive interests to these others, that is interests in the conditions for the realization of substantial interests. Specifically, these are (1) the extension of

⁴ To the extent that such rights exist, for example vis-à-vis non-professorial staff or in the course of specific decision-making processes, they are based at most indirectly on the scientific reputation mechanism.

the range of one's own interest realization, (2) dominance in a substantial sphere of interest, and (3) control over one's own interest realization.

Let us now apply this general idea to the problem of collective agency of scientific disciplines. I assume that the representative agency, in the case of scientific disciplines, is based on the commitment to the collective reflexive interests of these disciplines. More specifically, these interests include

- a) securing the means of production and reproduction for members of the discipline;
- b) securing disciplinary representation in relevant decision-making processes; and
- c) securing favorable rules of the game.

Let us now go through these three reflexive interests one by one.

(a) Disciplinary scientific work presupposes that the necessary means of production are available. The most important factor is work power. In a system where scientific work is overwhelmingly done not by private scholars but instead in the context of organizations, academic positions at universities and non-university research institutions are essential. But it is not only the positions themselves. One of the most crucial resources in the production of knowledge is time. Organizational duties can be time-consuming and may restrict the scientists' capacity to conduct research. In the case of universities, we can think of, for instance, teaching loads as well as managerial and, increasingly, accounting duties. Under the condition of organized science, then, having spare time available for academic work becomes crucial.

In addition to personnel, research depends on a wide range of material equipment and increasingly complex infrastructures (Barlösius 2016): from pencils to access to literature, data, and collections to nuclear reactors. Undoubtedly, needs vary considerably between disciplines, and they change over time. In any case, the disciplinary reflexive interest is to ensure that members have the material requirements for their research at their disposal.

With respect to the *reproduction* of knowledge, the establishment, maintenance, and expansion of study programs are of paramount importance. As in the case of research, additional personnel and material resources are – with considerable disciplinary variation – essential prerequisites of academic teaching.

The reflexive interest of scientific disciplines interest, then, is securing these means of production and reproduction.

(b) The existence of crucial means of scientific production and reproduction is one thing, control over these means another. It is the disciplinary reflexive interest to put the members of the discipline themselves in control. In this respect, the reflexive interest of disciplines corresponds to those that literature has identified as a crucial interest to those struggling to establish professions (Abbott 1988; Friedson 2001).

First and foremost, this applies to the individual scientific work itself. Disciplinary control over academic labor implies that disciplinary scientists are able to decide autonomously about their own work and that they can independently choose their research topics and research questions as well as their methods and theories. This includes the absence of directives but also the necessary “protected space” (Whitley 2014) to follow their own research agenda. Note what is important here: There is no reflexive disciplinary interest in tight collective control over individual action (here: research practices) but quite to the contrary in the autonomy given to the members of the discipline. Wherever research depends on a highly coordinated division of labor, as is often the case in many disciplines of the natural, life, or engineering sciences in particular, a fundamental tension is inherent. Personnel as a means of production is only available to the extent that not everyone acts as an autonomous decision-maker.

But the disciplinary reflexive interest in control goes beyond questions of individual autonomy. It also refers to the decision-making processes in which academic positions, the distribution of resources, the establishment of study programs, etc. are decided upon. In universities and non-university research institutions, this aspect is referred to as academic self-governance. The disciplinary reflexive interest is not only to have such decisions made by academics and not by managers (see section 6.4). Instead, the decision-makers should be members of their own disciplines and not of others. The same is true for decisions made by funding agencies or policymakers. Here, too, the reflexive interest of the discipline is to have its own members at least significantly involved in the process.

(c) With the rise of competitive forms of governance in science and higher education comes the proliferation of metrics, rankings, performance-based funding schemes, and formal evaluations (Espeland and Sauder 2007; Rijcke et al. 2016; Brankovic, Ringel, and Werron 2018; Pardo-Guerra 2022; see also section 6.5). The new valuation regimes may profoundly transform the allocation of reputation and funding and – depending on the rules of the game – may have differential effects on disciplines. Quite obviously, criteria for measuring performance are not equally favorable for every discipline.

For instance, bibliometric indicators may be much more suitable for disciplines that rely on publications in journals that are well-represented in the databases than for disciplines that prefer books. Likewise, third-party funding as an indicator of research performance⁵ will favor those disciplines that have easy access to such funding. While this applies in principle to engineering disciplines, for example, the picture may change if funding by business firms is discounted in indicator systems. But it is not just about the indicators used, it is also about who can legitimately be compared to whom. For

⁵ This indicator is of outstanding importance in the German science and higher education system. However, Gerhards (2013) calls this a “Sonderweg.”

example, bibliometric indicators may be entirely accepted as long as the respective discipline is not lumped together with another one that has significantly higher publication activity. Indicators applied in university rankings may also favor or disadvantage disciplines. An obvious case in point is the not-insignificant role that Nobel Prizes play in the Shanghai ranking. For reasons that are not yet fully understood, physicists or chemists seem to be more successful here than sociologists or scholars of Scandinavian languages, literature, and culture.

But these are just illustrations. The point is simply to show that different rules of evaluation may turn out to be differentially beneficial to disciplines. It is the disciplinary reflexive interest, then, to have rules of the game that are favorable to the respective discipline or at least do not put it in a disadvantaged position compared to other disciplines.

This leads us to an interesting observation: With respect to all three disciplinary reflexive interests mentioned (means of production, control over the means of production, rules of the game) we may find competition between disciplines. Research on science and higher education stresses the increasing importance of competition (Naidoo 2016; Waaijer et al. 2018). It also shows that competition occurs at different levels and between different types of actors: individual scientists, universities and non-university research institutions, and nation-states (Musselin 2018). This multiple competition connects a variety of competitions in complex ways (Krücken 2021; Krücken et al. 2021). Our analysis suggests that, to the extent that disciplinary representative agency can indeed be empirically demonstrated, competition between scientific disciplines complicates the picture. It is an open empirical question if and to what extent competition between individuals, organizations, and nation-states does increase or attenuate the collective agency of disciplines.

In this section, I have suggested understanding the collective agency of scientific disciplines as a form of representative agency in which actors advocate for the reflexive interests of their respective disciplines. These reflexive interests relate to the scientific means of production, control over those means of production, and favorable rules of the game.

4. Collective, Individual, and Organizational Interests

To what extent can disciplines' collective interests be distinguished from individual and organizational interests? The broader discussion on collective agency stresses the importance of distinguishing between individual collective intentions, i.e., between I- and we-intentions (Tuomela 2020). Personal goals may not correspond to collective goals and may even be contrary to them (Gilbert 2023, in this special issue). In our case, I assume that collective

disciplinary interests may be incongruent with both individual and organizational interests.

Let us start with the relationship between individual and disciplinary interests. It may appear as if the collective reflexive interests of scientific disciplines and the individual interests of scientists are well aligned. Scientists seem to foster their own interests when they are lobbying for their respective disciplines. If this is all we find, we may not need a concept of collective agency here. However, this need not be the case at all. It cannot be emphasized enough: disciplines are not clearly bounded and homogenous entities. Disciplinary scientific agency also means working for the interests of one's own competitors, advocating for subfields that are unrelated to one's own research, and possibly even promoting them at the expense of colleagues who are much closer in scientific perspective, as long as they do not come from one's own discipline.

A second question is, of course, if reflexive disciplinary interests can be reduced to organizational interests. Universities in particular are internally structured primarily according to disciplinary differentiations – in the form of faculties, departments, schools, and institutes. Organizational disciplinary representation is therefore fundamentally inherent in the formal structure that also determines academic self-governance. However, organizational structure does not necessarily correspond one-to-one with disciplinary structure. Not every discipline has a common organizational unit. And it is not uncommon for scientists from one discipline to be scattered across different organizational units. Often, they are involved in multidisciplinary – sometimes quite heterogeneous – units in which common and divergent reflexive interests coexist. Moreover, scientists may be involved in multiple organizational units – for example, departments and interdisciplinary research centers – in which disciplinary compositions differ.

So, what follows from this? We can assume, on the one hand, that a high degree of correspondence between organizational and disciplinary structures facilitates the intraorganizational representation of disciplinary interests. On the other hand, disciplinary agency that is independent of organizational units emerges more clearly where disciplinary interests can also be observed across organizational unit boundaries.

The interesting thing about disciplinary reflexive interests is precisely that they are in complex and tense relationships with immediate scientific self-interest but also with interests arising from organizational membership and membership in scientific subunits.

5. Who Represents Disciplines?

In this section, I will ask who exercises disciplinary representative agency. This question is not only important for determining where to look for representative agency empirically but also helpful for a preliminary assessment of the action capabilities that we can reasonably expect from scientific disciplines. To a considerable degree, disciplinary representation depends on formal organizations. But it is not centralized within a single organization but instead distributed. As a consequence, it does not and cannot rely on a single organizational hierarchy. Instead, it is likely to be found in a complex and presumably only loosely integrated network of actors individually committed to the reflexive interests of their respective disciplines. This specific structure makes it an interesting case for the theory of non-hierarchical collective agency.

5.1 Disciplinary Associations

The most obvious candidates for representative agency are disciplinary scientific associations. In our context, it seems evident that disciplinary scientific associations are organizations that represent disciplinary interests (cf. McCarthy and Rands 2013). In a sense, their role is even more fundamental because the existence of a disciplinary association is one of the standard formal criteria for acknowledging a scientific field as a proper discipline that can have interests in the first place. She who wants to establish a scientific discipline must establish an association.

As a specific type of organization, scientific associations are not much researched. We certainly find quite some historical literature on the essential role of learned societies and scientific associations in the emergence of modern science, but it is still true what Rainer Rilling wrote in 1986 (235): “The history of scientific societies appears to be better known than their contemporary structures and functions.”⁶ The existing empirical studies, however, clearly show that scientific associations are multipurpose organizations. Among other things, they facilitate scientific exchange (e.g., by organizing conferences and publishing scientific journals), foster knowledge transfer, and support early career scientists. Then, scientific associations provide and control at least some of the relevant means of scientific production and reproduction themselves. But even in cases where the association’s congresses and journals are highly significant for the respective disciplines, most of the means of production are clearly beyond their immediate control.

⁶ For a few exceptions, see von Gizycki 1979; Schimank 1988; Wissenschaftsrat 1992; McCarthy and Rands 2013; Delicado et al. 2014; Fumasoli and Seeber 2018.

As ordinary membership organizations, scientific associations elect organizational representatives from among their admitted members (associations differ markedly in their selectivity) who can undoubtedly, insofar as the association is recognized,⁷ act and talk as representatives of their discipline. Indeed, the association's representatives will usually be normatively obliged to be committed to the discipline's interests. Members will have any standing to expect them to be.

But scientific associations are weak when it comes to their action capability. They do not meaningfully control the scientific activities of their members nor even the discipline as a whole. It is the autonomous scientific activity of scientists that produces knowledge and is the disciplinary scientific communication itself not the processes of organizational decision-making in scientific associations where truth claims, theories, and methods are validated.

Indeed, the ability of disciplinary associations to make binding decisions (beyond some general codes of conduct they can hardly enforce) is severely limited. Yet, the scientific associations' lack of control over the means of production does not mean that they cannot or do not try to influence decision-making. It only means their capacity to do that is limited. But what measures do scientific associations have at their disposal?

One major way of influencing decisions is to try to get members of the disciplines positioned as decision-makers. In some cases, disciplinary associations are formally involved in securing disciplinary representation in other organizations. For example, in Germany, disciplinary associations can nominate (but not elect) representatives for the collegial boards of the decision-making in the most important funding agency: the Deutsche Forschungsgemeinschaft (DFG).

Another way of influencing decisions is lobbying, i.e., appealing to the actual decision-makers. This is indeed something disciplinary associations do, especially in times of crisis. For instance, if universities plan to abolish study programs or shut down entire departments, scientific associations may join the protests of local representatives and formally appeal to political or organizational decision-makers. For example, the University of Halle-Wittenberg was bombarded by statements from concerned scientific associations when plans to abolish various disciplines in the face of severe financial constraints became known.⁸ The scientific association for Scandinavian languages, literature, and culture, a comparatively small discipline, responded to the threat of losing study programs and professorships at two universities in Germany

⁷ Of course, this recognition can be problematic if competing associations are already established. See, as one example, the conflicts over the founding of the Academy of Sociology, which in Germany appeared alongside the already long-standing German Sociological Association.

⁸ Documented in: <https://mlunterfinanziert.wordpress.com/> (Accessed 06 April 2022).

with public outreach, which included an online petition.⁹ The German Historical Association tried to prevent changes to the rules of the game by refusing to participate in public ranking¹⁰ and rating¹¹ activities.

These more or less random examples illustrate, on the one hand, that disciplinary scientific associations do indeed engage in activity in reflexive collective interests of their disciplines. But on the other hand, it also shows the limitations of the action capability at their disposal. This is why effective disciplinary collective agency cannot rely on scientific associations alone, but also needs the activity of distributed disciplinary representatives.

5.2 Distributed Representation

Disciplinary representation is not monopolized in disciplinary associations. Quite to the contrary, it is very much distributed across science and science policy organizations. We have already seen that it is these organizations that make the crucial decisions. Effective representation, then, requires that relevant decision-makers in such organizations consider the reflexive interests of the disciplines. They may do so because they were successfully lobbied by representatives of the disciplines or because they are representatives of the disciplines themselves.

Indeed, decision-makers (or more broadly speaking people involved in decisions) are often selected based on their membership in scientific disciplines and as representatives of these disciplines (and this is, as I have argued, in itself a reflexive interest of the discipline). This can be justified on two grounds: one is the conviction that disciplines do indeed have a right to speak up for their own interests; the other is the idea that it is only disciplinary scientists who have the expertise that allows for informed decisions. In the latter case as well, positions can be used for the pursuit of reflexive interests. This even applies to peer-review activities. To be guided too much by considerations for the interests of the discipline in peer review may seem disreputable. From the perspective of funding agencies, for instance, reviewers are supposed to assess the scientific value of an object or *valuee* (Waibel, Peetz, and Meier 2021), not pursue disciplinary interests. However, commitment to collective goals is not incompatible with “morally” suspect intentions and behavior (see Gilbert 2023, in this special issue).

⁹ <https://www.openpetition.de/petition/online/schuetzen-sie-die-skandinavistik-vor-streichungen> (Accessed 04 April 2023).

¹⁰ <https://www.historikerverband.de/aktuelles/presse/stellungnahme-des-vhd-zum-che-ranking-der-deutschen-geschichtswissenschaft-august-2012/> (Accessed 04 April 2023); The German Sociological Association that had also refused to participate before recently changed its position.

¹¹ <https://www.historikerverband.de/aktuelles/presse/stellungnahme-des-verbandes-zum-vorschungsrating-des-wissenschaftsrates-2009/> (Accessed 04 April 2023).

Until now, we have focused on agency exercised by scientists for their *own* discipline. But it is possible that other actors – scientists from other disciplines and non-scientists – may feel the need to defend the interests of a supposedly threatened discipline. To some extent, this *external representation* may be self-interested. For instance, scientists may benefit from or even depend on scientific contributions from the respective discipline. The same thing holds true for non-scientific actors that expect to benefit from the discipline's outputs (for example, businesses that want to employ graduates). Also, coalitions of disciplines may form that support each other mutually, for instance, because they believe they are essentially in the same boat. However, agency for disciplines may also be a task actors may engage in without an apparent self-interest. For instance, defending the allegedly endangered humanities seems to be a legitimate activity with some cultural standing (cp. the concept of agency for non-actor entities in Meyer and Jepperson 2000).

This section dealt with the carriers of disciplinary representative agency. Scientific associations are undoubtedly salient representatives of their disciplines. Moreover, their collective organizational agency as membership organizations can be assumed to be relatively unproblematic. However, the actual action capabilities, that is, their capacity to make a difference with regard to the reflexive interests of the disciplines, do *not* lie with the scientific associations since they control neither the actual scientific process nor the means of production (or only to a limited degree). Therefore, effective disciplinary agency also presupposes the commitment of distributed actors to the reflexive interests of the discipline.

Of course, at times, and the illustrations presented above indicate this, distributed agency may also lead to concerted activities of heterogeneous actors. But given the loose integration of the discipline as a whole, this may rather be an exception than a stable pattern.

6. Some Major Trends

In this section, I will discuss the possible consequences of some significant transformations in science and higher education for the agency of scientific disciplines: globalization, ongoing specialization, increasing focus on inter- and transdisciplinarity, the rise of the university organization, and the proliferation of new measurement and valuation practices.

6.1 Globalization

Modern science is a global and globalizing endeavor. Against a global horizon of scientific knowledge production, there are signs of practical internationalization, for example, through an increase in international cooperation. No

doubt, disciplines differ in terms of how globalized or regionalized scientific communication contexts actually are. With regard to the collective agency of scientific disciplines, it is crucial to keep in mind that national disciplinary associations are often confronted with supranational ones. At the same time, decisions about scientific means of production often remain entrenched in national contexts. A partial (though still regionalized) exception is the increasingly important European funding (Gengnagel, Massih-Tehrani, and Baier 2016; Gengnagel 2021). From a perspective that transcends the national framework, incongruencies between the structure of scholarly communication and the scope of disciplinary agency become apparent. International comparisons may reveal how the collective agency of a given discipline may differ across national contexts. We may also find representative agency differs in its degree of internationalization across different fields of activity.

6.2 Ongoing Specialization

In science studies, disciplines have been studied from the outset in terms of their dynamics: disciplines change, new disciplines emerge, subdisciplines form within disciplines, and disciplines gain or lose importance relative to other disciplines (Ben-David and Collins 1966; Thackeray and Merton 1972; Mullins 1972; Lemaine et al. 1976). In this context, not only cognitive intrascientific dynamics play a role. Historical research, for example, has been able to establish a close connection between the formation of disciplines and their organizational anchoring at universities (Paletschek 2001). Likewise, the global and long-term rise and decline of disciplines have been traced to world cultural patterns (Frank and Gabler 2006). In our context here, of course, the question must be: How do variations in the capacity for representative agency affect the trajectories of disciplinary development?

In any case, the master's trend seems to be toward further specialization. This also poses challenges for the representation of disciplines, especially since new disciplinary associations are indeed forming all the time, including those for disciplines that were previously still treated as subfields in traditional disciplines. With the proliferation of new disciplines and disciplinary projects, new actors may act on behalf of the interests of newly formed – and usually but not always more narrowly defined – collectives. This may weaken existing disciplines but also lead to conflicts over adequate representation.

6.3 Inter- and Transdisciplinarity

The ongoing trend toward specialization as well as a focus on “grand challenges” motivate calls for inter- and transdisciplinarity. Even though in the debate about a “Mode-2” of knowledge production (Gibbons et al. 1994; Nowotny, Scott, and Gibbons 2001) it has been suggested that disciplinary research is quite fundamentally taking a back seat to transdisciplinary forms,

such pointed diagnoses have been received somewhat skeptically in science studies (Weingart 2001). More recent analyses have reaffirmed the continuing structural importance of scientific disciplines (Jacobs 2013). But what does this mean for collective disciplinary agency? In any case, disciplines must deal with the fact that they are perceived as outdated and conservative (cf. Kroll and Schubert 2023) structural forms, which could seriously undermine the legitimacy of a commitment to disciplinary reflexive interests.

6.4 The Rise of the University Organization

I have already referred to the literature on the organizational actorhood of universities in the introduction. The shift of decision-making authority from planning ministries to profile-building universities comes with changes in the arenas in which effective disciplinary agency can take place. While a trend toward a more managerial style of intra-organizational decision-making leads in many countries to a loss of power of the collegial bodies of self-governance, which have been the traditional strongholds of disciplinary representation, it is far from obvious that this results in an overall weakening of disciplinary power in decision-making. Indeed, the transformation may also strengthen disciplinary elites (Meier and Schimank 2010).

6.5 The Proliferation of New Measurement and Valuation Practices

We have already considered the proliferation of new valuation devices like metrics, rankings, and ratings and how disciplines may have a collective reflexive interest in favorable rules of the game. But how do these kinds of devices change the ability of disciplines to exercise representative agency for reflexive collective interest? On the one hand, indicator-based systems are basically suspected of undermining the autonomy of professional and, thus, disciplinary work since they can also be applied by laypersons. However, there is little evidence that the relevance of peer review is actually in decline. On the other hand, disciplinary organized national evaluation systems may lead to a more robust disciplinary representation in the organizational structure, as we find it, e.g., in the case of Poland (Antonowicz 2020).

To sum up, dynamic developments in the field of science and higher education are very likely affecting the representative agency of scientific disciplines. And they may do so in a variety of divergent directions. There is no reason to expect the collective agency of scientific disciplines to be stable and every reason to expect conflicting commitments to a variety of heterogeneous collectives.

The next task now is to apply the framework developed here empirically. It must be shown to what extent an agency of disciplinary reflexive interests that is detached from individual and organizational interests can actually be demonstrated. How does agency differ across different disciplines? How can

differences be explained? And above all, what are the consequences for the development of disciplines? Do some disciplines flourish because they are more effective in their collective agency than others?

7. Conclusion

This paper has addressed the collective agency of scientific disciplines, which are themselves only weakly integrated. Although they have visible organizational addresses in the form of scientific associations, they are not characterized by the kind of accountability that is characteristic of contemporary universities. They do not control their scientists' actions, they only have limited collective resources at their disposal, and they do not control the crucial means of production.

However, this does not mean there is no representative agency. In the case of disciplinary representative agency, individual and organizational actors are committed to the legitimate "interests" of a discipline and act on their behalf. I have argued that reflexive interests of the discipline may be the basis for the collective intentions usually seen as a prerequisite for collective agency. In terms of action capability, I was skeptical. In this respect, disciplines are rather weak. They depend on the support of distributed individual and organizational actors. As a consequence, a picture of a loosely integrated network emerges that is structured in parts by internal and external conflict and competition. Still, we can expect that at least some individual or collective actors sometimes represent the reflexive interests of their disciplines.

What does the idea of representative disciplinary agency contribute to the broader discussion on collective agency? It is precisely the weakness of the organizational basis for collective action and its distributed character that makes it an interesting case. The follow-up question is of course: What is the social basis for the commitment to the reflexive interests of a loosely integrated collective? A part of the answer seems to be that scientific disciplines are highly institutionalized categories of practice. Though the "groupness" of disciplines is – from a scientific perspective – far from being unproblematically given, the taken-for-granted character, the "naturalness" of the disciplinarity of science (not necessarily of the single disciplines), is probably a precondition for representative agency to emerge. If this is true, representative agency may also be a useful concept in the investigation of collective agency in the case of collectivities with a similar character like ethnicities or nationalities (Brubaker 2002).

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