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Re-appraising disciplines: a commentary

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ABSTRACT

Our aim in this commentary is to challenge one of the claims made by interdisciplinarity advocates: that disciplines are silos and, as such, hinder cross-disciplinary knowledge exchange. This claim is a central feature in interdisciplinarity advocates' rationale for promoting structural changes across universities and reallocating resources toward interdisciplinary research units and training programmes. We use citation practices to demonstrate that cross disciplinary communication occurs despite claims otherwise. Considering the overwhelming amount of data generated by bibliometric studies, we argue that knowledge exchange across disciplines is too large to be ignored and that the silo thesis should be re-examined. The longitudinal perspective adopted by bibliometricians also shows that cross-disciplinary communication is far from being a new trend, but to the contrary is a well-established practice among academic communities. We begin our commentary by briefly reviewing three widespread assumptions underpinning pro-interdisciplinary arguments: (1) disciplines' specialization hinders cross-disciplinary communication; (2) disciplines shun away from addressing real world problems; (3) disciplines are self-centred entities primarily competing for academic authority. We conclude our commentary by suggesting that a better understanding of the benefits and limits of interdisciplinarity requires moving away from broad statements about the alleged insularity of disciplines and openness of interdisciplinarity.

KEYWORDS

Interdisciplinarity; disciplines; cross-disciplinarity; knowledge exchange; knowledge dissemination; bibliometric data

Introduction

The usefulness of academic disciplines has been the subject of much criticism in recent decades. Disciplines, it is argued, are inward-looking, static, and operate as silos that (re)produce bounded knowledge categories, thus constraining cross-disciplinary knowledge exchange. Since their emergence at the turn of the twentieth century (Geiger 2017), critics contend, disciplines have evolved into self-centred research communities primarily preoccupied by their own fate rather than by finding solutions to real-world problems through cross-disciplinary collaboration.

Our aim in this commentary is to challenge one of the claims made by interdisciplinarity advocates: that disciplines are silos and, as such, hinder cross-disciplinary knowledge exchange. As Brint (2005) and Sá (2008) documented, this argument is a central feature in interdisciplinarity advocates' rhetoric for promoting structural changes across universities and reallocating resources

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toward interdisciplinary research units and training programmes (see for example Crow and Dabars 2020, the National Academy of Science 2005 and the OECD 2020). We will use findings from recent bibliometric studies to show that disciplines, from the citation practices lens, may not be as insular as interdisciplinarity advocates claim they are.

A brief overview of three key critiques advanced by interdisciplinarity advocates will first help us situate our commentary within the broader debate around disciplines and interdisciplinarity. These critiques intersect to varying degrees with the primary issue of knowledge exchange; our reason for including them is that they are frequently made arguments in debates around interdisciplinarity. After reviewing these critiques, we return our attention to the specific issue of cross-disciplinary communication. Using evidence from bibliometric research, we explore the following: Do disciplines themselves inherently act as knowledge exchange barriers?

Key critiques of the disciplines

Specialization induces disciplinary isolation

A common critique targeted at the disciplines concerns their 'specialization', which typically manifests itself through their research objects, evaluation criteria, taken-for-granted assumptions, theories, and methods. Being a specialized knowledge domain, critics claim, leads disciplines to generate fragmented knowledge, thus producing a reductionist understanding of the world. This stands in contrast to the holistic insight believed to be derived from interdisciplinary approaches. In a recent publication on the future of the university, Darbellay (2019) offers a vigorous plea supporting this standpoint. He writes: "The specialization of knowledge, through the many attendant approaches, epistemological postures, languages, and disciplinary methods, fragments the objects of study into disjoint parts. These communities of specialists are plunged into academic isolation, blocking any possibility of interdisciplinary dialogue" (Darbellay 2019, 97). Newell (2001) shares this concern and assert that the remedy to disciplines' fragmentation is to create more interdisciplinary linkages: "Since the various disciplines have been developed precisely to study the individual facets or sub-systems, interdisciplinary study is a logical candidate for developing specific, whole, complex systems to study such phenomena" (Newell 2001, 2). More recently, Szostak (2007) identified theories and methods as the two culprits for the disciplines' inability to see beyond their inner boundaries: "The different theories and methods that dominate different disciplines serve as perhaps the major barrier to cross-disciplinary conversation" (Szostak 2007, xii). Likewise, Giacomini (2004) asserts that "disciplines create islands of knowledge" (2004, 179), and "isolated specialists become unable to recognize relevant advances in parallel fields" (2004, 179).

In her most recent book, Klein (2021), a leading figure in interdisciplinary studies, usefully summarized the central barriers to interdisciplinary research identified by interdisciplinarity advocates, such as the National academy of science, the British Academy and the OECD. No less than 46 barriers are listed in Klein's summary. Unsurprisingly, disciplines and departments-based silos appear among key organizational impediments to cross boundary crossing (2021, 122).

The logic behind these claims is based on parallel reasoning; since social problems and complex systems do not follow disciplinary lines, disciplines should declare forfeit and let interdisciplinary coalitions take over. This view has gained wide traction across the academic world and beyond (Frickel et al. 2017; Jacobs 2014; Louvel 2021) and, for many, has become an undisputable truth. Disciplines, the argument goes, because of their blinders, are simply not equipped to grasp the world in all its complexities and, instead, produce overly specialized and siloed ways of viewing the world. These silos need to be broken down to allow for a greater, nuanced knowledge integration. Various versions of this argument have been developed over the last decades (see for example, Crow and Dabars 2020, Jacob 2015, National Academy of Science 2005; Power and Handley 2019; Szostak 2007, Townsend et al. 2015), and have provided the groundwork for university administrators and policymakers to expand interdisciplinary research and training.

While our primary focus in this commentary is to challenge the notion that cross disciplinary knowledge is constrained by the types of siloing argued above – and not to focus on the perceived negative outcomes of specialization – we feel that it is important to also raise the following questions for consideration: How can a group of academics disseminate their findings, engage in debate, and potentially refine their views, yet avoid evolving into an expert/specialized community? How can a research community last over time without developing an expertise around a set of questions that differentiates itself from other research groups? See for example Morange (2020) and Mullins (1972) on the history of molecular biology, Noël (2021) on supramolecular chemistry, and Stichweh (1992) on the development of the disciplines in the late eighteenth century.

Disciplines' alleged lack of social relevance

According to interdisciplinarity advocates, one of the consequences of the hyper-specialism of disciplines is that they lose their social relevance. If disciplines are primarily busy debating esoteric questions and defending their turf, they ask, what meaningful contribution can they make to society (Frodeman 2010; Huutoniemi and Räfols 2016; Wowk et al. 2017)? The recommended alternative is to implement a new regime of knowledge production; one that is more problem-centered and interdisciplinary, echoing Gibbons et al.'s Mode 2 knowledge production regime (1994).

Jacobs (2014) sought to verify the accuracy of the claim according to which contemporary academics are uninterested in studying real-world problems. He conducted a search in the data base Web of Knowledge for papers published during a 20-year period, from 1990 to 2010. His findings indicate that there is no shortage of research on important social problems. (Jacobs 2014). “[W]hether the topic is AIDS, immigration, climate change, racism, sexism, domestic violence, homelessness, or terrorism” (2014, 96), thousands of papers have been written attempting to grapple with these social issues (see Figure 5.4, in Jacobs 2014, 97). Relatedly, the bibliometric data compiled by Pfeiffer and Dermody (2021) and by Shapira (2020) show a rapid response from academics to the social need for scientific knowledge around COVID 19. Both studies recorded a steep increase of publications on SARS CoV since the beginning of the pandemic; many of these publications coming from fields that do not usually study viruses, such as psychiatry, neuroscience, oncology, and economics (Shapira 2020).

The data gathered by Jacobs (2014), Shapira (2020), and Pfeiffer and Dermody (2021) resonate with the findings from historians of science, STS and higher education scholars (see for example Frickel et al. 2010; Godin 1998; Graff 2016; Kleinman 1998; Louvel 2021; Mody 2017; Pestre 2003; Weingart 1997). Scholars in these domains have documented the intricate relationship between university and society and its changing nature over time. An obvious conclusion to draw from their work is that the university is demonstrably *not* an isolated island. As in the past, current academics collaborate with their fellow colleagues and/or with external stakeholders (e.g. private and public organizations, governments, socioeconomic groups) to tackle socioeconomic problems. The portrait drawn by historians and STS / higher education scholars does not align with the Manichean representation conveyed by interdisciplinarity advocates. The academic field *does not* emerge as divided into two opposing groups: (1) disciplinary scholars researching topics disconnected from social issues, and (2) interdisciplinary scholars spending their time thinking about how to solve practical problems. Instead, depending on the main orientation of the field they work in (i.e. applied or basic), their career stage, the institution they are affiliated with, and the funding opportunities available to them, scholars may alternately direct their effort toward more problem-solving or more basic/conceptual research over the course of their career (Albert 2003; Bentley, Gulbrandsen and Kyvik 2015; Ylijoki, Lyytinen and Marttila 2011). Thinking about academic research through the lens of a binary opposition may not be the ideal way to grasp such idiosyncrasies. Advocating for changes across the academy on the grounds of such dichotomy opens the door to potentially ill-informed and ineffective restructuring initiatives.

Disciplines' alleged "ethnocentrism"

Another claim made by critics is that the "ethnocentrism" and "ingroup partisanship" of disciplinary researchers (Campbell 2017) reinforce the insularity of the disciplines. The argument is that researchers reinforce and mobilize boundaries between disciplines to increase the authority of their own discipline within the university, and academia more broadly. The following quote exemplifies this position: "Disciplines/disciples fiercely defend their spaces, patrol boundaries, and regard those who either intrude or disrupt with suspicion" (Bird, 2001, 467).

The critique made by Bird (2001) and Campbell (2017) (see also Sherif and Sherif, 2017) does not concern the cognitive limitation of the disciplines due to their specialization, but rather the desire of the latter to preserve or increase their status within academia. Disciplinary researchers are argued to be reluctant to engage in collaboration with outsiders as they fear it may compromise their control over a knowledge area, which in turn may lower the status of their discipline within the academe and thus undermine their access to resources.

Since disciplines are institutionalized in departments and research units (Geiger 2017), their existence depends to varying degrees on the resources allocated by their institution. Material and financial (as well as symbolic) considerations, therefore, are necessarily part of the equation when thinking about the existence of disciplines over time – see Sewell's report (1989) on social psychology departments in the United States. One may wonder, then, how these considerations would fade away with the replacement of disciplinary departments by interdisciplinary units. How would these units secure their status in the academic/university field (Bourdieu 2004) without being similarly strategic about their access to resources, which may include episodic recourse to "ethnocentrism" posturing and "ingroup partisanship"? It follows that supplementing departments with interdisciplinary units might not be a viable long-term solution to the alleged lack of knowledge exchange between research fields (Albert et al. 2020; Bridges 2006). Would the institutionalization of interdisciplinary units not recreate the organizational structure and associated self-preservation behaviour these units were supposed to overcome? What interdisciplinarity advocates seem to be indirectly calling for is a new social arrangement where academics would live their professional life as free-floating minds, uprooted from any epistemic, institutional, and cultural linkage. The risk associated with this epistemic and organizational restructuring, however, could be the creation of an environment propitious to scientific amnesia. Without epistemic and socio-historical rooting, science is likely condemned to repeat itself.

Another point also deserves attention. If, as critics contend, disciplines are reluctant to collaborate and share their knowledge for fear of losing status, how can we explain the creation of new research domains? Examples from the last 50 years include, to name a few, social epidemiology, population geography, biological anthropology, artificial intelligence, molecular biology, nanomedicine, and cognitive sciences (Bailey 2014; Berkman and Kawachi 2000; Graff 2015; Little and Sussman 2010; Louvel 2021; Morange 2020;). Some of these research domains have further evolved into institutionalized disciplines or sub-disciplines. In all cases, new fields of inquiry and disciplines bring together and build on various knowledge sources (Dogan and Pahre 2019). This hybridization implies that disciplinary researchers, in contrast to Bird's claim (2001), do not primarily spend their time patrolling borders to expel intruders; rather – at least for many – they invest time into reading, learning, and importing ideas from fields outside their own (Jacobs 2014). This does not mean that departments are not performing institutional boundary-work (Fini et al. 2022) but, rather, that despite centripetal forces, scholars engage with colleagues outside their domain and develop new fields of research. Our position is that such engagement is indeed taking place. In the following section, using bibliometric studies to provide insight into cross-disciplinary citation practices, we will demonstrate that disciplines are not as insular as critics contend.

Cross-disciplinary communication

We now turn to the central question we set to examine in this commentary: Do disciplines, by their very existence, act as knowledge exchange barriers?

Bibliometric evidence against the myth of disciplinary silos

One way to examine cross disciplinary knowledge integration is to look directly at the outputs of knowledge production itself, i.e. the literature. A considerable number of bibliometrics studies measuring knowledge exchange across disciplines have been published over the last decades. Based on datasets comprising thousands and millions of references, these studies examined knowledge flow within and across disciplines. Some of these studies have a longitudinal perspective and allow for comparison across time. In what follows, we summarize findings from five studies on cross-disciplinary knowledge exchange.

Larivière and Gingras (2014) measured the degree of interdisciplinary of articles in four scientific domains over a period of 100 years, from 1905 to 2005: medical science, social sciences, the natural sciences and engineering, and the arts and humanities. Their dataset included 768 million references made by about 35 million papers. The disciplinary classification of papers they used is that of the U. S. National Science Foundation (NSF). For each article included in their dataset they created an interdisciplinary score. This score was based on the number of references of each article to: (1) papers from other disciplines (e.g. Biology cited in Physics); (2) papers published from other specialties but in the same discipline (e.g. Optics cited in Nuclear Physics); and (3) papers published from the same specialties (e.g. Education cited in Education).

The highest percentage of interdisciplinary referencing was 50%, a score reached by the arts and humanities since year 2000, and by the social sciences at the turn of the twentieth century and again more recently after year 2000 (2014, 195). Conversely, the lowest percentage of interdisciplinary referencing has been around 20% – still relatively high – found in the natural sciences and engineering at the beginning of the twentieth century and again during the 1970s and 1980s. This percentage doubled after 1980 to reach close to 40% in 2005. Medical science positioned itself between the social sciences and the natural sciences, with an interdisciplinary rate oscillating between 20% and 35% throughout the century.

Truc and colleagues (2021) examined cross-disciplinary knowledge exchange in 12 social science disciplines and academic domains: sociology, anthropology, political science, psychology, economics, management, demography, education, geography, humanities, international relations, and law. Their examination focused on knowledge flow toward these disciplines (knowledge import) and from these disciplines toward other disciplines (knowledge export). They found that the percentage of references flowing toward these 12 disciplines (knowledge import) in 2018 varied between 38% in management and close to 80% in demography. Like demographers, sociologists also stood out as knowledge importers with 70% of their references coming from outside their field. Anthropology and political science followed, with about 60% of external citations. Psychology and economics had respectively 45% and 43% of their references coming from outside their close circles (Truc et al. 2021, 8).

As for the knowledge flowing outwardly, sociologists and demographers were seen to be the highest knowledge exporters with almost 80% of their production cited outside their discipline (Truc et al. 2021). Geography, anthropology, political sciences, economics, and psychology followed with between 55% and 68%. Management, law, education, and international relations, at the low end of the spectrum, were shown to have between 40% and 45% of their production cited by scholars from outside their domain (Truc et al. 2021, 13). These findings, like those of Larivière and Gingras (2014), suggest that disciplines do not fit within the silo metaphor, and would be more accurately characterized as a series of interconnected nodes.

Chen and colleagues (2015) conducted a longitudinal study on citation patterns in biochemistry and molecular biology. Their dataset included close to 41 million references spanning over a 100-year time frame, from 1910 to 2012. They report that the number of disciplines cited in biochemistry and molecular biology grew from 1 to 93 over that period, indicating a clear trend toward expanding interdisciplinarity knowledge circulation. Simultaneously, biochemistry and molecular biology internal citations dropped from 74% at the beginning of the twentieth century to 32% in 2012.

Again, here, these numbers show a trend toward expanding cross-disciplinary knowledge communication.

Porter and Rafols (2009) investigated cross-disciplinary exchanges in six “subject categories” from 1975 to 2005 (biotechnology and applied microbiology; engineering; mathematics; medicine; neurosciences; physics). They selected these subject categories as they sought to include in their sample traditional, emergent, basic, and applied fields. The main finding is that the integration score (i.e. low/high diversity intensity in interdisciplinary citations) increased over time in all six categories. Although Porter and Rafols mentioned that the integration score only slightly increased over the period they studied, it remains that in 2005 the score was oscillating between 60% in medicine, biotechnology and applied microbiology, neuroscience, and physics, and 30% in mathematics. Relatedly, Porter and Rafols also found that articles in their sample published in 2005 – apart from mathematics which is more internally focused – draw upon 50% more subject categories than their 1975 counterparts.

McLevey et al. (2018) examined knowledge flow in publications from philosophers of science. To construct their sample, they “created a list of philosophers of science who published two or more articles in any of the major philosophy of science journals, wrote a philosophy of science dissertation indexed by ProQuest Dissertations & Theses, or was a member of the American, Canadian, or British professional associations in 2016” (McLevey et al. 2018, 335). They collected the metadata for all available articles by these authors ($n = 27,734$) from the Web of Science database. Their goal was to determine which journals philosophers publish their work in and, subsequently, where their work gets cited. McLevey et al.’s findings show that philosophers of science publish articles in no less than 11 different disciplinary clusters. While publication in journals from their own disciplines unsurprisingly represent their main dissemination venue, philosophers of science also publish their work in domains such as psychology, biology, physics, social science, and medicine, to name just a few (McLevey et al. 2018, 337).

Interestingly, in McLevey et al.’s study, cross-disciplinary communication occurs through the publication practices of the authors themselves, and not through citations, unlike the five other studies we reviewed. In this case, the academics themselves became exporters of knowledge.

Bibliometric studies are obviously not without limitation; they do not tell the entire story about cross-disciplinary communication. Scientists have complex citing motives, including citing scholars ritualistically, giving prominent scholars their due, and disputing findings and claims they deem to be inaccurate (Bornmann and Daniel 2008). Bibliometrics findings are also dependent on the breadth of the categorization of disciplines and research clusters used by authors (Jacobs 2014; Lariviere and Gingras 2014). Larger categories, because they generate a smaller number of clusters, reduce the scope of interdisciplinary knowledge exchanges. Smaller categories create the opposite. Despite the range of motives, it remains that all cited work needs to be known; citations are indicators of knowledge flow, not of authors’ motivation for citing.

Re-appraising cross-disciplinary communication

In light of the large amount of data analysed by the five studies we targeted, and their converging findings (other bibliometrics studies also suggest similar patterns), one can argue that the trends revealed by these studies indicate a volume of knowledge exchange across disciplines too large to be ignored. It follows that the claim that disciplines are self-centered and curb knowledge exchange should be re-examined. While there are variations across disciplines and time, the findings all point towards one direction: ideas, concepts, theories, and methodological tools travel fluidly across the academic landscape. Academics take the time to integrate and use the literature produced outside their local circle. Also, as McLevey et al. (2018) showed, academics themselves become cross-disciplinary knowledge brokers as they publish their work in journals outside their discipline. Retaining the pro-interdisciplinary claim that one should be wary of disciplines because they

hinder intellectual exchange would appear to be taking a position inconsistent with the available evidence when it comes to citations patterns.

The longitudinal perspective offered by the data compiled by Lariviere and Gingras (2014) and Chen et al. (2015) shows that cross-disciplinary communication is far from being a new and ephemeral trend, but is rather a well-established and longstanding practice among academic communities. While there have been variations across time in the intensity of cross-disciplinary knowledge exchange, it remains that scientists have always drawn on the work of colleagues outside their discipline to advance their own research – a mundane phenomenon Rob Moore rightly termed “routine interdisciplinarity” (2011) [see also Bonaccorsi et al. (2022)]. Therefore, borrowing knowledge seems to be standard practice, not the exception. It also should be emphasized that this practice had been in place long before calls for interdisciplinarity proliferated and universities engaged in institutional restructuring.

The trends displayed by bibliometric studies also resonate with Rhoten’s qualitative findings from her study on interdisciplinary research centres and programmes. She writes: “In contrast to the often stereotypical portrait of stubborn, risk-averse scientists resistant to venture from their disciplinary safe houses, we encountered many researchers – particularly younger researchers – driven to the edges of their fields by a shift in their epistemological values and intellectual interests” (Rhoten 2004, 8).

Interdisciplinarity as a symbolic device

In light of the mounting evidence showing that disciplines themselves are not necessarily an obstacle to the circulation of knowledge across disciplines, why do university leaders continue to reallocate significant resources to interdisciplinary initiatives (Brint 2005, Sá 2008)? We believe part of the explanation could reside in what DiMaggio and Powell (1983) called isomorphism: a response to social expectation through imitation and orthodoxy. Interdisciplinarity is socially associated with positive values such as innovation, creativity, breaching-boundaries. Disciplines, conversely, are usually pejoratively connoted: being static, rigid, conservative, averse to innovation are among the characterizations ascribed to them (Weingart, 2000; Brint, 2005). In the context of such a binary view, it could be perceived as politically questionable for a university leader not to support interdisciplinarity. Brint further showed that universities in the United States brand themselves as being interdisciplinarity “to climb up the hierarchy of prestige” (2005, 46) and access resources otherwise inaccessible to them.

What Weingart and Brint are calling attention to is the idea that interdisciplinarity is more than a mode of knowledge production. It is also a symbolic device used by academic organizations to gain legitimacy in the eyes of stakeholders; some of them more inclined to see merit in problem-solving research than in disciplinary/basic research [see Albert and Laberge’s study (2017) on how interdisciplinarity has been rhetorically used by a funding organization in Canada to increase its political legitimacy]. The positive valuation of interdisciplinarity and its new legitimizing power could be part of the explanation for its widespread adoption across universities (hence our reference to isomorphism), as well as its popularization as a rhetorical tool associating innovation with disciplinary transgression. Interdisciplinarity is used for promoting structural changes across universities and reallocating resources toward problem-focused research units and training programmes.

Conclusion

In this commentary, our primary goal was to challenge the wide-spread idea that disciplines are inherently silos and that their very existence hinders the ultimate aim of cross-disciplinary communication. In light of the overwhelming amount of bibliometric data generated in recent years, we believe that the silo thesis can be put to rest. Disciplines historically have – and continue to –

import and export knowledge from outside their boundaries. A secondary goal of this work was to shed light on three interrelated assumptions underpinning interdisciplinarity advocates' calls for change in the academe: (1) disciplines' specialization hinders cross-disciplinary communication; (2) disciplines shun away from problems that matter for society because of their 'hyper specialism' and struggle for authority; (3) disciplines' "ethnocentrism" engenders turf wars. For each of these assumptions, we sought to show their limits and signaled their lack of empirical grounding.

In order to move away from broad statements about the alleged insularity of disciplines and openness of interdisciplinarity, examining modes of knowledge production empirically across time and space would generate a more nuanced understanding of the various forms of relationships between academic groupings. Bringing to bear socio-historical approaches in interdisciplinary studies could indeed help stop depicting disciplines as static and undifferentiated entities. It would bring them back, so to speak, within the realm of social institutions and reinstate their complexity and historicity as one of their basic features. Our view resonates with Trowler's position on the limitation of current approaches for the study of disciplines. He argues that these approaches are too essentialist and overlook the heterogeneity of disciplines (2014). We come to a similar conclusion through our reading of the literature promoting interdisciplinarity. This literature tends to build, explicitly or implicitly, on an ossified and essentialist view of the disciplines.

As noted by Frickel et al. (2017) the literature promoting interdisciplinarity is also often programmatic and celebratory. The taken-for-granted assumption is that interdisciplinary research is better than disciplinary research. However, this assumption is based on faith more than on empirical evidence. Interdisciplinary advocates would make a stronger case in favour of a reorganization of academic knowledge production if they could make an empirical demonstration of the superiority of their interdisciplinary model over the current one.

It needs to be stressed that our commentary focused solely on cross-disciplinary knowledge flow as measured by citation analysis. We have not addressed the institutional dimension of disciplines (Buanes and Jentoft 2009). Therefore, we make no comment on the self-protective behaviour individual disciplines may display within their specific context to maintain their status within the academic system and the impact of such behaviour on cross-disciplinary communication.

From an epistemological perspective, questions about the structure of knowledge production also need to be raised. If disciplines institutionally and cognitively structure knowledge production in certain ways, how could this not also be true for interdisciplinary knowledge production? If disciplines shape how one thinks and conducts research – a phenomenon denoted by Fleck's concept of "thought style" (1979) and Bourdieu's "disciplinary habitus" (2004) –, would similar institutional and cognitive structuring processes not occur over time in interdisciplinary fields? Even if we posit that modes of knowledge productions need to free themselves from disciplinary structures, the proposed interdisciplinary replacements would probably generate their own cognitive and institutional structures, unless these regimes engage in a permanent revolution. See, for example, Albert et al. (2022), Martin (2016), and Pfau (2008) on how three interdisciplinary fields, medical education research, innovation studies and communications studies, have grown into three self-referential research fields. More attention needs to be devoted to what disciplines and interdisciplinarity have in common (inherent cognitive and institutional structures) before claiming that interdisciplinarity allows unconstrained forms of knowledge production while the former imposes the opposite.

The critical stance adopted in this commentary toward pro-interdisciplinarity discourses should not be interpreted as a position against collaboration across the disciplines, nor is it a call against academics investing time into studying problems important to society. Instead, our reflections are aimed at broadening the space for the critical examination of taken-for-granted assumptions associated with interdisciplinarity. Nuance is needed. We believe that a better understanding of the benefits and limits of interdisciplinarity start by moving away from binary schemes and debatable assumptions that do not hold true under scrutiny.

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