

# HIGHER EDUCATION ORGANIZATIONS AS STRATEGIC ACTORS IN NETWORKS: INSTITUTIONAL AND RELATIONAL PERSPECTIVES MEET SOCIAL NETWORK ANALYSIS

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## ABSTRACT

*Informed by multiple disciplines, theories, and methods, higher education scholars have developed a robust and diverse literature in many countries. Yet, some important (organizational) sociological perspectives, both more established and more recent, are insufficiently linked. In particular, we identify two theoretical strands – institutional and relational – that, when joined, help to explain contemporary developments in global higher education and yield new organizational insights. We review relevant literature from each perspective, both in their general formulations and with specific reference to contemporary higher education research. Within the broad institutional strand, we highlight strategic action fields, organizational actorhood, and associational memberships. Within the relational strand, we focus on ties and relationships that are especially crucial as science has entered an age of (inter)national research collaboration. Across these theories, we discuss linkages between concepts, objects, and levels of analysis. We explore the methodological approach of social network analysis as it offers great potential to connect these strands and, thus, to advance contemporary higher education research in a collaborative era.*

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## INTRODUCTION

The study of higher education has grown considerably over the past two decades. While in many countries, it has matured as a scholarly field (Huisman & Tight, 2018), globally it remains scattered and stratified (Daenekindt & Huisman, 2020). It draws on a wide range of disciplines, particularly education, economics, management, political science, psychology, and sociology; it applies various methodologies – historical, qualitative, and quantitative. Expansive higher education systems and the myriad stakeholders involved in these reflect the growing importance of higher education and science in contemporary societies (Baker, 2014; Frank & Meyer, 2020; Schofer, Ramirez, & Meyer, 2021). Some studies have analyzed universities within “networked knowledge societies” (Hoffmann & Välimaa, 2016), but many insights from organizational studies remain to be integrated in higher education research (Kivistö & Pekkola, 2018). In this chapter, we explore two theoretical perspectives – institutional and relational – that, especially when combined with social network analysis (SNA), help to explain (inter)organizational developments in contemporary higher education. In particular, we focus on the university in an era of scientific collaboration, embedded in diverse relationships on multiple levels, from the local to the global. We investigate higher education as an institutional environment and organizational field made up of universities and other research-producing organizations as organizational actors. In particular, we focus on relationships between organizations within diverse higher education environments (Dusdal et al., 2020).

Our first perspective focuses on neoinstitutionalism. We argue that more recent advances in institutional theory-building hold important analytical potential for the study of higher education’s contemporary dynamics (Krücken, Mazza, Meyer, & Walgenbach, 2017), especially cross-border competition and collaboration, global networks, and coauthorships (e.g., Dusdal, Oberg, & Powell, 2019; Gazni, Sugimoto, & Didegah, 2012; Powell & Oberg, 2017; Powell, White, Koput, & Owen Smith, 2005). Specifically, we direct attention to strategic action fields (SAFs) (Fligstein & McAdam, 2012), not least because neoinstitutional theory has long been criticized for neglecting agency, interests, and power (e.g., Mutch, Delbridge, & Ventresca, 2006, p. 608), also due to misunderstandings and limited readings (Wiseman, Astiz, & Baker, 2014). The second institutional strand we present centers on university “actorhood” and “otherhood,” two concepts that reflect universities’ growing autonomy, goal orientation, and social embeddedness – notions that reconceptualize the university in world society (Bromley & Meyer, 2015; Krücken & Meier, 2006; Ramirez, 2006).

Related to this are associational phenomena, including the rise of supranational governance and influential international organizations. Universities’ environments are now filled with not only myriad professional, disciplinary, and scientific associations and alliances, but also quality assurance and accreditation

agencies, which are mostly nongovernmental and increasingly international, with diverse effects on other organizations (see [Parreira do Amaral, 2006](#); [Serrano-Velarde, 2014](#)). Some of these are so-called meta-organizations, with other organizations as members, which provide a dense environment crossing levels within a globalizing field ([Schofer, 1999](#); [Zapp & Ramirez, 2019](#)). Universities themselves are increasingly bound together in formal, ad-hoc, and often exclusive relationships and also in more comprehensive and inclusive alliances, associations, networks, and partnerships ([Brankovic, 2018a](#); [Marques & Powell, 2020](#)). Higher education worldwide is embedded within an increasingly tightly knit fabric of university associations with various missions, ranging from promoting science to advocating sustainable development, even offering solutions to grand challenges, such as health and climate crises. Simultaneously, such membership opens up avenues for distinction, stratification, and fragmentation, and transposes differences and distinctions across levels.

Our second perspective borrows from the growing field of relational sociology (for overviews, see e.g. [Crossley, 2010](#); [Donati, 2010](#); [Papilloud, 2010](#); [Powell & Dépelteau, 2013](#)). Having the conceptualization of relations as an ontological enterprise, relational sociology places greater emphasis on ties and interactions as the main constituent of society. Thus, society can neither be (fully) understood by examining self-interested individuals nor the structures that frame or guide individuals' behavior. Such an understanding that rejects a purely voluntaristic and structurally deterministic approach to the study of society ([Emirbayer, 1997](#)) includes prepositions to inform other theoretical enterprises and expands the higher education research program. Relational sociology has become a burgeoning social-scientific paradigm in its own right through advances in theorization and methodology. Here, we argue that many theoretical tenets and key questions from relational sociology – mostly addressing the individual level – can be usefully applied also at the organizational level. This facilitates our understanding of contemporary processes and more recent phenomena in higher education, increasingly involving interorganizational collaboration. Discussing key approaches in relational sociology, we then focus on the field of higher education, its existing inequalities, and power dynamics.

Linking these two theoretical perspectives, we explore the potential of SNA to contribute to such studies. As [Birkholz and Shields \(2017\)](#) emphasize, focusing on networks in higher education research facilitates our understanding of its antecedents, consequences, and characteristics. We now turn to our two chosen theoretical perspectives in sociology before exemplifying the potential of SNA to examine interorganizational relationships.

## **INSTITUTIONAL THEORIZING IN AND OF HIGHER EDUCATION**

Institutional theory has certainly established a notable place in higher education scholarship. Indeed, many early neoinstitutional theorists began their theoretical work in the context of (higher) education (e.g. [Cohen, March, & Olsen, 1972](#);

Weick, 1976). Scholars involved in building their research universities reflected on their vision and experiences guiding higher education massification, whether as leading administrators (Kerr, 1963) or researchers (Clark, 1986).

However, considerable prominence of neoinstitutional theorizing in higher education scholarship notwithstanding, most such thinking still draws on the first wave of neoinstitutional theory, i.e. pre-1990s work (see Cai & Mehari, 2015 for a review). In these contributions, issues of institutionalization, isomorphism, field and environmental dynamics dominate, echoing the foundational works by DiMaggio and Powell (1983, 1991), Meyer and Rowan (1977), and Meyer and Scott (1983). While such loyalty to the classics is justified, especially when key questions remain relevant, recent advances in neoinstitutional theory-building facilitate tackling recent changes in the globalizing higher education landscape (see Krücken et al., 2017). This is especially true as universities become increasingly visible as individual organizations that are networked globally via their scientists' connections and funding programs (Zapp, Marques, & Powell, 2018, 2021), most visible in the exponential growth of research collaborations and the resulting coauthored papers across all fields (Powell, Baker, & Fernandez, 2017). Next, we briefly highlight three selected concepts of neoinstitutional theorizing of relevance to increasingly global higher education organizations and their networks: SAFs, actorhood and otherhood theory, and associational memberships.

#### *Strategic Action Fields*

While there is an ample literature on universities' strategic behavior and action (see Gumpert, 2012; Fumasoli & Huisman, 2013, for reviews), the conceptualization of SAFs and their applicability for the study of higher education is recent. Fligstein and McAdam (2012, p. 10) define SAFs as "socially constructed arenas within which actors with varying resource endowments seek advantages." They propose three fundamental socially constructed aspects: (1) the sense of belonging, based on subjective aspects rather than on objective criteria; (2) field boundaries changing according to the definition of the situation and disputed issues; (3) the understanding that underlies field operations, including shared meaning of what is at stake in the field; who the incumbents and challengers are; the field's rules; and how actors should act. Additionally, the concept of social skills is key to understanding SAF dynamics. Social skills denote a "complex mix of cognitive, affective, and linguistic facilities" which underlie individual strategic action as the microfoundations of SAF emergence, transformation, and reproduction (Fligstein & McAdam, 2012, p. 46).

Recent contributions explore the concept of SAF in higher education research. In his historical study of the Mercer University heresy trial in 1939, Taylor (2016) shows how multiple SAFs – consisting of incumbents (university presidents) and the higher education industry and challengers (individuals in the Protestant social movement) – collided. The conflict produced organizational changes; modern administrative conventions were embraced. A second study utilizes SAF to explain the emergence of the European Research Area (ERA): Kauppinen, Cantwell, and Slaughter (2017) direct attention to social skills and mechanisms

shaping the ERA. In the initial phase of the ERA's institutionalization, actors seeking to influence its development mobilized collective attributions of threat/opportunity, social appropriation and innovative collective action, coalition formation, and boundary deactivation. These mechanisms emanated from and propelled further contention as the involved actors pursued divergent agendas for the nascent ERA: the SAF remains in a situation of open-ended construction. Crucial to understand organizational dynamics on multiple levels, these studies use SAF to analyze conflicts between various constellations of actors that affect individual organizations embedded in higher education and research systems.

### *Actorhood and Otherhood*

Another strand of more recent neoinstitutional thinking draws attention to universities as organizational actors in their own right. Starting in the mid-2000s, universities have been reconceptualized from "specific organizations" (Musselin, 2007) to "autonomous," "normal," "complete," "real," "formalized," and even "empowered" organizations (Bromley & Meyer, 2015; Krücken & Meier, 2006; Ramirez, 2010). At the core of these accounts lies the assumption that universities – like other organizational forms, from public administrations to nonprofit sectors – are undergoing a transformation toward organizational actorhood. Similarly, organizational subunits develop their own relationships, whether in disciplines or in communities of professional practice (Marques & Powell, 2020). In an era of collaborative science (Wagner, 2018), supporting relationships with other knowledge-producing organizations is essential to extend the social capital needed to compete globally; universities actively broaden their horizons.

Actorhood describes organizations' structural and behavioral transformation by including autonomy (or sovereignty), intentionality (or goal orientation), accountability, and social embeddedness or citizenship as part of their core identity (Bromley & Meyer, 2015). A growing body of empirical findings attests to cross-national trends that reflect these new organizational traits and behaviors. For example, analyses of mission and vision statements (Kosmützky & Krücken, 2015; Mizrahi-Shtelman & Drori, 2020), reforms of formal structure, and publication outputs uncover change and growth of an organizational form increasingly influential in and between societies worldwide (see Zapp et al., 2018). "Social embeddedness" as one particular feature of organizational actorhood deserves particular attention to understand universities' strengthened actorhood. Universities' "citizenship" or "social embeddedness" refers to contributions to diverse stakeholders and solving social problems (Bromley & Meyer, 2015; Ramirez, 2006). The counter model – the "socially buffered" university – is increasingly under pressure by governments to become more "relevant" and deliver "impact" and from markets in which student and family choices trump the preferences (and privileges) of the academic "nobility" (Cole, 2011; Lenhardt, 2002; Morphew, Fumasoli, & Stensaker, 2018). Under such conditions, the university morphs into an organization that pays increasing attention to students' and employees' diversity, rights, work–life balance, environmental policy, and an increasing number of associations and identity groups (Frank & Meyer, 2020).

Viewed from a social theory perspective, the socially embedded university reflects otherhood more than actorhood. Otherhood refers to the social process of enacting agency and mobilizing action for other actors (e.g. nation-states), nonactor entities (e.g. children, endangered species), and principles (e.g. human rights) (Meyer, 2019; Meyer & Jepperson, 2000). Almost ideal typically, universities reflect all of these forms of otherhood – simultaneously. They advise directly (or train students to influence) other actors – mainly individuals, organizations, and states – to reform themselves, organizational structures, and policies through therapy, consultancy, and policy recommendations. Universities act on behalf of nonactor entities. As a reflection of this active actorhood and otherhood, universities increasingly embed themselves in associations, constitute alliances, and establish myriad national and international partnerships.

### *Associational Memberships*

The higher education landscape has experienced what has previously been described in societies generally as a “global associational revolution” (Salamon, 1993). We highlight two phenomena that reflect such associational processes and science systems: (1) the plethora of organizations now operating in universities’ environments and (2) the growing interorganizational density created by universities themselves via their diverse memberships.

Universities and science have always been transnational in character; however, the twentieth century witnessed the striking expansion of science associations around the world; disciplines and professions grew, even exponentially since 1980 (Schofer, 1999). Such growth processes continue as new (sub)fields emerge and become institutionalized as academic disciplines, from biochemistry to social work (Frank & Meyer, 2020). Large-scale reorganizing is also fanned by new regional and global associations that operate across national borders, particularly in Europe, in which dozens of new disciplinary associations along with their journals and conferences emerged in the late 1990s (Fumasoli & Seeber, 2018). Many of these have individual scholars as members, while others – so-called meta-organizations – consist of organizational members. These associations operate across and in parallel to higher education organizations to strengthen ties and networks of individual scientists beyond their specific locale.

Higher education organizations are active in global governance. Expansive networks of international organizations, intergovernmental and nongovernmental alike, provide discursive platforms in which specifically “global” higher education knowledge is produced, managed, exchanged, and disseminated worldwide. Using data from the *International Congress Calendar* published by the Union of International Associations (UIA), Zapp and Ramirez (2019) explore the global interorganizational regime in higher education involving various types of international organizations as well as states and university associations (see Fumasoli, Stensaker, & Vukasovic, 2018 for a European analysis). This regime revolves around a number of substantive domains, including not only quality assurance and accreditation but also recognition of degrees and student and staff mobility. The density of such networks is greatest in Europe where the

organizational architecture comprises, among others, the European Association for Quality Assurance in Higher Education (ENQA), the European Students Union (ESU), the European University Association (EUA), and the European Association of Institutions in Higher Education (EURASHE). Parallel to this European process, other world regions also thicken supranational governance infrastructure, notably in the field of quality assurance responsible for maintaining academic standards.

Such dense organizational infrastructures create “nested organizational fields” in which local, national, regional, and global levels interlock (Hüther & Krücken, 2016; Seeber, Cattaneo, Huisman, & Paleari, 2016). This associational world also multiplies and rescales levels and sites of higher education governance. This bears less resemblance to the national public administrations that dominated higher education for much of the twentieth century (Zapp & Lerch, 2020).

Below the level of disciplinary, professional, and governance networks, universities increasingly engage in formal relationships with each other and in meta-organizations that represent organizational members (Ahne & Brunsson, 2008; Berkowitz & Dumez, 2016). Brankovic (2018a), tracing the emergence of university associations over time, finds 185 associations, most regional or global in focus, which were founded in this century. Some are small and exclusive, others are large and transcontinental. In more exclusive associations, membership is either confined by *geography* (e.g., Network of Universities from the Capitals of Europe (UNICA)), *mission* (Global University Network for Innovation), or “*excellence*” (e.g., the League of European Research Universities (LERU)) (see Vukasovic & Stensaker, 2018). By contrast, the International Association of Universities (IAU) is an example of an inclusive sectoral meta-organization that is open to nearly all organizations in the field globally.

The growing number of official higher education networks bolster the trend toward greater integration within a *global* field. While more inclusive associations (e.g., IAU) provide legitimacy gains for less prestigious universities, they are often avoided by top-ranked universities, which usually flock together in exclusive alliances (Zapp, Jungblut, & Ramirez, 2020). Simultaneously, associations and meta-organizations may well contribute to further stratification or even fragmentation on a *national* level. Examples include the alliance of the nine leading Universities of Technology in Germany (TU9 – <https://www.tu9-universities.de/about-tu9/>) or the Berlin University Alliance (<https://www.berlin-university-alliance.de/en/index.html>) to foster collaborative innovative research and teaching at state level as well as the Ivy League of leading research universities in the United States that capitalize on shared exclusive reputations. Such alliances structure and stratify higher education and scientific fields. In this sense, associational structures are used as markers of distinction and fuel further competition (Brankovic, 2018a; Hazelkorn, 2015), especially given market competition for paying students in many countries. While competition is a key force driving higher education, so too is collaboration, extending across levels from team to global level (Powell, 2020). In this context, to better understand the relationships and networks in higher education and science with a focus on the organizational level of analysis, relational theorizing is helpful, to which we now turn.



## HIGHER EDUCATION AS A RELATIONAL PHENOMENON

Contemporary higher education is marked by expanding and diverse forms of relations, transactions, communications, processes, and practices. Relationships spanning institutional, disciplinary, organizational, associational, and cultural boundaries extend the range of discovery, the reach of teaching programs, and the embeddedness of the university in society. As scientific publication departs the age of “scientific nationalism” within an era of “global mega-science” driven by international collaboration (Baker & Powell, *in press*), research produced by scientists in different organizations is an increasingly prominent feature of studies in higher education (Kwiek, 2020). International collaborations, maintained by relationships across time and space, among individuals, teams, organizations, and countries, have facilitated the unprecedented exponential growth in scientific knowledge, especially since the 1990s (Powell et al., 2017). Key aspects of such boundary-spanning relationships important to higher education include the SAFs in which these systems and organizations evolve, the organizational actorhood that reflects the growing capacity of organizations to actively construct and maintain relationships locally, regionally, and globally, and growing associational memberships and (inter)national university networks as well as scientific collaborations across different organizational forms.

### *Relational Sociology Approaches*

Relational thinking “is an invitation to challenge social phenomena, to think in terms of fluid social processes rather than isolated individuals or external and solid structures” (Dépelteau & Powell, 2013, p. xv). This presumption appeared as a reaction to the division of individualistic and holistic sociological paradigms, or the classic tension between agency and structure that long characterized sociological thinking. Despite sharing a common understanding that relations are the unit of analysis that give meaning to social reality, relational thinking is marked by distinctive approaches to understand how relations shape social reality.

The underlying assumption is that social reality is composed of relations that are dynamic, continuous, and processual, rather than static substances either in the form of structures or actors (Emirbayer, 1997). Relational thinking distinguishes itself from substantialism – the idea that *substances*, static things, or beings are the main object of analysis – by looking at *relations* as the sources forming social reality. Relational thinking distinguishes itself by examining relations; thus, an organization would be analyzed “in relation to” others, instead of its substance. Emirbayer (1997, p. 287) formulates exchange relationships as “transactions” – sociocultural patterns and rules – that build the basis for social networks leading to continuations and structured dynamics of exchange. Transactions shape meanings and identities perceived through the study of such relational processes, including communication (Fuhse, 2015), that are dynamic. Relations as ties are measured by their strength through linkages, which explains



the creation of social relationships and proximity, mechanisms that affect geographical or social interactions (Seeber et al., 2012, p. 292). Such relational thinking, identified by Dépelteau (2018), has been applied to better understand higher education phenomena in contemporary research.

### *Field, Inequalities, and Power Dynamics*

Research in higher education that embraces a relational approach often emphasizes power relations between those in certain social positions. The accumulation of social capital provides actors with power to influence a field and align the structure of that field based on their own interests (Bourdieu & Wacquant, 1992). Importantly, social capital must be understood as a resource that cannot be produced by an individual (organization) itself, but derives through social interaction with others, accumulated in embedded resources in social networks (Lin, 1999), as exemplified within associational memberships, university alliances, and (inter)national partnerships.

Bourdieu's notion of field and its constituting role of power (see Barlösius, 2006; Clegg, 2012; Robbins, 1993) helps to explore power asymmetries in higher education systems nationally (Bathmaker, 2014; Maton, 2005; Mendoza, Kuntz, & Berger, 2012; Naidoo, 2004; Webb et al., 2017) or globally (Marginson, 2008). Cultural, economic, and familial structures equip contrastive pairs with internal and inherent coherency and have an impact on the behavior of social actors (Bourdieu, 1987; Bourdieu & Wacquant, 1992). Although fields represent a way to frame such investigations, the issue is embedded in the way fields are treated; they have frequently been specified as one or more "variables," rather than as the context and outcome of social relations. By conceptualizing "relations between terms or units as pre-eminently dynamic in nature, as unfolding, ongoing processes rather than as static ties among inert substances" (Emirbayer, 1997, p. 289), the habitus of actors can be interpreted as the mechanism to reproduce a specific social structure that shows social differences in a relational way, a crucial link between structure and agency.

For example, at national level, the social field is employed to show the relationships of power between English-language universities, white Afrikaans-medium universities, and black universities, and how they contribute to the reproduction of racial hierarchy in South Africa (Naidoo, 2004). Examining England, Bathmaker (2014) shows how admissions practices in two organizations shaped the experiences of students in choosing vocational and alternative routes in higher education, while Maton (2005) discusses how economic and political issues were reinterpreted in the relatively autonomous higher education field and materialized in educational aspects through policy debates. In Australian higher education, Webb et al. (2017) explore the relationship between social class background and inequalities. For the United States, Mendonza, Kuntz, and Berger (2012) show how a single faculty reacts to academic capitalism, which strategies it employs, and how such endeavors relate to faculty habitus. Marginson (2008) uses the concept of field to show stratification: the global higher education field divided between elite Anglo-Saxon universities that

professionalize an intellectual elite of leading researchers and a diversified group focused on revenues and market share, such as for-profit and not-for-profit vocational or teaching-oriented universities.

While these studies show considerable breadth in analyzing various relations within higher education, our interest is to show how higher education organization(s) can be better understood by linking institutional and relational thinking – with SNA, a promising method to do so.

## **JOINING INSTITUTIONAL AND RELATIONAL SOCIOLOGICAL APPROACHES THROUGH SOCIAL NETWORK ANALYSIS**

SNA “comprises a broad approach to sociological analysis and a set of methodological techniques that aim to describe and explore the patterns apparent in social relationships that individuals and groups form with each other” (Scott, 2017, p. 2). Already in 1988, Wellman outlined that research should focus on social relationships to embed them into larger historical and institutional contexts, and suggested SNA as a powerful analytical tool to conduct this type of research. SNA was once defined as “a technique in search of a theory” (Collins, 1988, p. 412) or a set of methods with the potential to serve as a theoretical concept because it enables researchers to investigate social structures (Emirbayer & Goodwin, 1994) and patterns of relations on different levels of analysis, such as individuals, organizations, or countries. Changes in network structures and distribution provide key insights to better understand long-term structural changes. The combination of substantive theorizing with a powerful methodological approach is important, as this is an underdeveloped aspect of SNA, because methods themselves do not necessarily imply or require a particular theory but rather theoretical contextualization (Scott, 2011, p. 24). Much SNA remains descriptive even as it helps to characterize via visualization the social relations and structures of networks on different levels of aggregation. Ideally, SNA goes beyond the visualization of social relations and structures to observe direct and indirect connections among actors and to explain processes through measures of density, strength, symmetry, and range of the binding ties (Emirbayer & Goodwin, 1994).

The power of SNA has been recognized, resulting in a significant increase in the scope of topics in higher education research applying SNA (for reviews, see Biancini & McFarland, 2013; Kezar, 2014; Birkholz & Shields, 2017). Such studies have explored student, academic, organizational, and country relationships. Fundamentally, SNA helps to locate the positions of actors and the intensity of their connections within a network. Positionality in networks is determined by such characteristics as the size of an organization, disciplinary focus, or reputation.

The position of a university in a research area may depend on regional involvement (share of projects with at least one regional partner), its

concentration index (number of collaborations with regional partners), and its leadership ratio (principal investigators on research projects) (Seeber et al., 2012, p. 293). For their improvement of positioning and to identify opportunities for development, it is essential for universities to better understand and manage the driving forces and interaction in such networks. Today's well-connected universities serve as ideal platforms for (inter)national research collaborations as they lend individual researchers connections via bilateral agreements, programs designed to foster exchange and shared infrastructure. Their "glonacal" positioning depends on the "relational quality" of their network ties and relationships (Dusdal et al., 2019); in line with Bourdieu's idea of the accumulation of scientific capital by researchers, organizations accumulate "relational capital" as they develop their reputations.

SNA can serve as a tool to transcend macro, meso, and micro levels of analysis. The degree of overlap of two actors' networks varies with the strength of their relationship ("tie") to one another (Granovetter, 1973). This is true for individuals as for the organizations in which they conduct their research. The difference between "strong" and "weak" ties is a "(probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter, 1973, p. 1361). Compared to strong ties, weak ties build bridges and connect different networks with each other, bringing new information into the network that actors from even closer social environments cannot provide. Applying transactions, processes, and ties within organizational thinking, relational sociology analyzes how organizational action is understood and situated as well as how connections within and across organizations and their wider context evolve (Mutch et al., 2006, p. 607).

Commonly differentiated are sociocentric or complete networks that consist of ties between defined sets of actors, e.g., professional ties among researchers within a university department and ego-centered networks that examine, for each actor of a defined set of actors, the relationships of the defined type (e.g., research collaborators who coauthor). Coauthorships have grown exponentially and diversified globally (Wagner, 2018), yet in higher education research, such nationally variant networks are not yet comprehensively analyzed (but see Kwiek, 2020 on Poland). A process-oriented approach lends itself to the analysis of the highly dynamic field of global higher education, consisting of innumerable links between individual researchers and organizations, different organizational forms, and fields (Dusdal et al., 2019). With the development of new technology and methods borrowed from computer sciences, relational spaces of social practices and networks of a research community can be comprehensively investigated (Kozłowski, Dusdal, Pang, & Zilian, 2021).

Organizationally, studies have analyzed globally ranked university interactions in social media (Shields, 2016), the European educational research network (Marques, 2018), the expansion and consolidation of universities' networks in the Erasmus Mundus joint master degree program (Marques, Zapp, & Powell, 2020), or the relationships between companies and higher education associations (Metcalf, 2007). Finally, country relationships are explored in the analysis of

international student mobility flows (Kondakci, Bedenlier, & Zawacki-Richter, 2018; Shields, 2013) and international scientific collaborations (Adams, 2013; Cummings & Kiesler, 2005; Dusdal et al., 2019; Gazni et al., 2012).

Having discussed SNA as a rewarding methodological approach to link institutional and relational approaches in higher education organizational research, we conclude with suggestions for further research.

## **ANALYTICAL STRATEGIES FOR INSTITUTIONAL AND RELATIONAL HIGHER EDUCATION RESEARCH**

We have discussed institutional and relational thinking to analyze higher education organizations using SNA. Analyzing communication, events, processes, and practices as proposed in relational thinking – as means of relationships – facilitates our understanding of how ideas, norms, or rules are created, how they circulate, and how they are institutionalized within organizational fields viewed through the establishment and consolidation of networks. Examining the strength of ties provides opportunities to enhance activities within social networks, understanding which relations and actors are key and how they diffuse and institutionalize certain ideas, norms, and behaviors. Such an analytical standpoint facilitates understanding of the development of legitimacy, status, and reputation based on relationships and network positions, while pinpointing specific actors and the processes in which they are involved.

The idea to apply SNA in modeling field dynamics goes back to the initial formulation of organizational fields (DiMaggio & Powell, 1983). Empirical efforts to analyze the entire structure of fields using SNA appeared later. In the seminal account of the dynamics of the biotechnology industry, Powell et al. (2005) show that networks have multiple field functions and can serve as a source of information, resources, trust, and collusion. However, SNA does not explicitly provide information on power and culture in fields (Fligstein & McAdam, 2012). Networks may be the skeleton of fields, but not the body. The concept of SAF may help to reveal such relations and build a bridge to other concepts: Bourdieu and Wacquant's (1992) idea of fields, in which a focus on social power dominates, or institutional and constructionist accounts that focus on shared understandings and taken-for-granted routines (DiMaggio & Powell, 1983; Jepperson, 1991; Meyer & Scott, 1983).

Contemporary research investigates the impact of (inter)organizational collaboration networks on diverse collaborations between science-producing organizations and shows that international research collaborations are associated with higher-quality research and that internationally coauthored publications garner greater research impact (Adams, 2013; Levitt & Thelwall, 2010; Rigby & Edler, 2005); facilitating coauthorships, organizational alliances may drive scientific quality and impact. Nevertheless, such alliances are faced with significant challenges, such as legal barriers in the awarding of joint degrees, varying resources, and reputational battles between organizations. If we assume that diverse organizational forms, networked organizations, and single

organizations are subject to specific determining factors, have various tasks, and pursue different targets, we expect diverse priorities in developing scientific quality. Within Europe, these differences seem to decline as new funding programs emerge that reward larger collaborations and encourage double and joint degrees, such as the Erasmus Mundus and Marie Skłodowska-Curie programs (Marques et al., 2020).

Higher education organizations are embedded in nested organizational fields. Hütter and Krücken (2016, p. 53) distinguish global, European, national, state, and regional fields to explain the seemingly paradoxical “simultaneity of homogenization and differentiation.” The two specific neoinstitutional perspectives – SFA and associational – we highlighted reflect such a multilevel field structure. One avenue to link collective rationality and relational dynamics is to conceptualize university associations as mirrors of universities’ self-images and façades. Extending the work of Brankovic (2018b), SNA techniques may help to uncover the underlying relational dynamics that stratify higher education, commonly analyzed through rankings (e.g. Hazelkorn, 2015; Brankovic, Ringel, & Werron, 2018) that do not include all organizations or well-reflect their diverse relations across different fields, from local to global.

In such a relational field perspective, university associations are markers of distinction and boundary-drawing. One hypothesis suggests that universities with the highest reputation, which include not only the largest number of partnerships but also a strong capacity to promote a particular self-image (e.g. through vision and mission statements), collaborate more. In this marketplace of symbolic and social capital, SNA could help to detect organizational clusters that may be more or less exclusive. Such studies would uncover both vertical and horizontal differentiation in the global ecology of tens of thousands of higher education organizations.

Another fruitful extension of current scholarship on universities’ growing social responsibility would identify universities’ substantive shifts and link these to the relationships in which they are embedded. For example, the strikingly overt higher education role in recent public controversies worldwide, including “Rhodes Must Fall,” “Black Lives Matter,” “#MeToo,” “Scientists for Future,” and Covid-19 vaccine development lend themselves to examine the relational dynamics involved. Recent neoinstitutional research aims to combine relational structures with meaning construction (Powell & Oberg, 2017). SNA is a useful tool that helps to uncover the importance of relationships between actors yet is limited when it comes to defining their substantive nature. Revealing these instances where ties between specific actors generate meaning, advance new, or alter extant agendas – indeed, shape public discourse – requires the integration of neoinstitutional and relational theory perspectives. Universities, as organizational actors committed to solving real-world problems and embedded in diverse networks, provide opportunities for the investigation of changing missions and their related partnerships and coalition-building efforts.

Universities as organizations are active simultaneously on multiple levels, providing platforms where levels overlap, and public, private, governmental, and nongovernmental actors meet. Interestingly, while THE World University

Impact Ranking 2019 (THE 2020; based on 11 sustainable development goals) allows universities to self-select 10 goals, one indicator – 17: partnerships for goals – is compulsory. It seems that universities, when driven by heightened competition, band together to collaborate, teaming up for the public good of global progress (Powell, 2020). Investigating the relational patterns in such mission shifts facilitates understanding of the transformation of universities from primarily local and national entities, emphasizing teaching and learning, to science-producing organizations that may even spawn global knowledge hubs, from Silicon Valley to Singapore.

Traditional higher education indicators (measures of research production, research and development, educational activities, transfer, etc.) do not sufficiently take the relational structure within which universities are embedded into account. They ignore fundamental relational dimensions of the field (Seeber et al., 2012, p. 291). By contrast, we assume that relationships within, between, and beyond universities have an impact on their opportunities and performances since (inter) national collaborations as well as growing networks and alliances of universities have become increasingly important. Here, relational analysis could support understanding of the interplay of (inter)national competition and collaboration (see Deiacó, Holmén, & McKelvey, 2010) as well as the investigation of the boundary-spanning relationships universities nurture. Analyses solely targeting the micro dimension (relations between individuals) or macro dimension (relations between countries) cannot deliver full understanding of questions of collaboration because they ignore organizational and individual behavior that shapes relationships at meso level.

In placing the emphasis on relations, levels of analysis become secondary. This could uncover certain ties that transcend levels (see e.g. Marques et al., 2020). Studying relationships could strengthen the operationalization of nested organizational fields to understand the relational dynamics without the rigidity of privileging certain levels. Research could also build upon Clark's triangle and concept of universities as "matrix organizations" (1986) or the national institutional environment, shedding light on other dynamics that did not originate or are even mediated by the national level but might impact it, for instance, global rankings, international associational structures, or affiliations to supranational meta-organizations. Moreover, such an approach could illuminate the complex web of relations that universities have with other organizational forms, such as research institutes, (inter)nationally (see e.g. Dusdal et al., 2020).

Other suggestions for further research include combinations of historically and institutionally grounded approaches to study organizations, examining the impact of social structuration on organizational actors' ties (Mutch et al., 2006, p. 622). Analyses should attend to relationships across levels of analysis, examining the qualities of these essential relationships to research, teaching, and sociopolitical change. Conceptualizing social theory, historical and institutional sociology, and SNA in light of each other was neglected (Emirbayer & Goodwin, 1994, p. 1412). Thus, this seems all the more relevant today in organizational studies in higher education as the extraordinary relational capital of universities powers contemporary knowledge production – more collaborative than ever.

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