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## **The academic dispositif. Towards a context-centred discourse analysis**

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### **Abstract**

This contribution outlines the dispositif approach, which combines a linguistic discourse analysis of texts with a sociological study of the social context (i.e. the dispositif understood as an institutional arrangement of practices and structures). We use the discourse of academic researchers to exemplify this approach. By articulating Correspondence Analysis of self-representations on researchers' homepages with institutional data of sociology professors in the United Kingdom, we outline a research design that consists of three components: a linguistic analysis of texts, a sociological analysis of institutional contexts, and a theoretical account of how the two are related in the academic dispositif. The dispositif perspective on discourse aims to respond to a demand for systematic discourse research on the social and institutional contexts of discursive practices.

### **0. Introduction<sup>1</sup>**

In discourse, meanings are realised and established among members of a social community. Discourse is a meaning-making practice, which operates with gestures, images and, most importantly, on language. From a discourse analytical point of view, texts and contexts, utterances and their uses in certain social structures and institutional settings always need to be studied in conjunction. Language, represented by texts, does not make sense outside the contexts in which it is used. And it is difficult to account for contexts without language referring to them. Discourse analysts, therefore, deal with the problem of how texts are

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articulated with contexts, especially social configurations, which are not simply represented but also constituted in discursive practices.

Discourse analysts deal with the relationships between texts and social contexts in many ways. While for some approaches social contexts are closely tied to discursive practices (they are ‘within discourse’ as it were), others conceive of social context as existing independently of discursive practices, i.e. as an external reality. Pragmatic approaches to discourse, which look at the contextualisation of utterances, can be cited as an example of the former. To analyse discourse pragmatically means to ask how utterances, through the cues, markers and instructions they provide, evoke certain (aspects of) contexts. The latter, by contrast, is testified by structural or power theoretical approaches to discourse. In this view, for the social meaning of texts to be understood, one needs to relate to the immediate, pragmatic context of enunciation as well as to the wider social and historical horizon over which they are used. Discourse analysis, in other words, would produce a partial picture of social meaning making practices if it ignored aspects of social reality that are not shown in texts.

In this contribution, we will make the case for a context-centred discourse analysis by citing findings from our research on academic discourses in the ERC DISCONEX project.<sup>2</sup>

*Dispositif* is a Foucauldian concept that tries to capture and link the heterogeneous textual and non-textual context conditions in which discourses emerge. Operationalisations of the concept pay attention to hierarchies and power structures in institutions, architectural order, regulations and laws, and scientific statements etc. that together form a network of dispositional elements that the construction of meaning in discourses depends on (for an introduction: Raffnsøe, Gudmand-Høyer, and Thaning 2016). A *dispositif* analysis integrates an analysis of language use with an analysis of the aforementioned context elements. In this text we will give an example of how to account for a *dispositif* with the help of quantitative methods. We apply these methods on short texts from institutional webpages. This first analysis is part of a larger study in which we combine an analysis of academic texts with a *dispositif* analysis of academic careers and institutions. This larger study aims to show that academic publications need to be seen against the background of the researchers’ social positions in the institutional *dispositif*, as well as the symbolic dynamics within their scientific communities. We will apply these theoretical considerations with two specific

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<sup>2</sup> The concept for the information system from which we draw our examples was developed within the research project ‘Discursive Construction of Academic Excellence’, funded by the European Research Council and led by Johannes Angermüller. We are grateful to the whole ERC DISCONEX team for allowing us to present a part of their research ideas to which all four authors have contributed in various stages. For more information please see: <http://www.disconex.discourseanalysis.net>

empirical questions in mind: How can we account for the discursive construction of social order in the academic discipline of sociology? How do social relationships of difference and inequality that constitute the sociological field go together with the linguistic organisation of the field, i.e. a specific distribution of words and expressions across the social space?

The first section will discuss why we should integrate context data into our discourse analysis, and it will elaborate on the different types of social contexts that sociologists relate to in their discursive practices. In the second section, we will ask how sociological insights into the social context can inform a discourse analysis of the discipline of sociology. Specifically, we will discuss possible (statistical) categories that help to operationalize contexts of academic discourse. Our approach is illustrated in the third section, which outlines an empirical analysis of the research interests that United Kingdom (UK) full professors in sociology mention on their homepages. We demonstrate how these data can serve as an entry point for a context-centred analysis of academic discourse. The fourth section ties the argument back to the theoretical background of the *dispositif* approach and reveals the methodological framework that guides the analysis and offers pathways of interpretation. The contribution closes with a discussion of our proposed approach in the fifth section.

## **1. Integrating sociological data into discourse analysis**

In this section we will outline a methodological argument that explains why analyses of discourse need an explicit and systematic analysis of social and historical contexts. The combination of linguistically informed discourse analysis and sociologically informed context study seems to be useful because texts, language, gestures and pictures on the one hand, as well as social and institutional rules and structures on the other, refer to and constitute each other.

### 1.1 The problem of text and context

The question of text and context has been the subject of a great deal of controversy. Regarding Critical Discourse Analysis (CDA), which often shows some preference for structural approaches (especially Fairclough 1992, Reisigl and Wodak 2016), conversation analysts insist on considering only those contexts that are relevant for the participants of a conversation. They criticize CDA for subsuming observations of real speech under social theories of the broader social context, e.g. large power structures of colonialism, capitalism, racism etc. It is argued that the analyst's view of the context is imposed onto the text. The

problem in some CDA research is that the context is presented as a given so as to reduce the research to nothing more than an illustration of what is already known about the context. Conversation analysts are right in criticizing CDA for a tendency to posit some ideas about the social and historical context, which the study of text and talk can do nothing but confirm. Van Dijk's sociocognitive model (Dijk 2008, 2009) responds to such criticism with a more dynamic understanding of context that points to the role of cognition in relating language to society. Yet van Dijk, like many other critical discourse analysts, refrains from systematic empirical study of the social context in which texts are used. While subsumption is a problem for all social scientists whose objective is to make empirically grounded claims about social objects, linguistic discourse approaches often resort to intuition when it comes to accounting for the broader social and historical contexts.

In line with socially-minded linguists, who have long insisted on the systematic empirical observation of real linguistic and discursive practices (Bhatia, Flowerdew, and Jones 2008, Blommaert 2005, Sarangi and Coulthard 2000), we will make the case for a sociological take on social and historical contexts. We will cite and elaborate Foucault's concept of *dispositif* in order to seize the social context as an institutional arrangement of linguistic practices and non-linguistic practices, rules and structures in a larger social community. While text and talk can be analysed with the classical instruments of discourse analysis (from pragmatics to corpus analysis), the *dispositif* is analysed with the help of sociological methods (such as interviews, questionnaires, statistical analysis, ethnography).

With the concept of the *dispositif*, we make the case for sociological perspectives on discursive practices as embedded in institutional power arrangements (the notion of *dispositif* has been the object of debate in France, where the term originated, and Germany: Angermüller 2010, Angermüller and Philippe 2015, Bührmann and Schneider 2007, 2008, Maeße and Hamann 2016, Maingueneau 1991, Spieß, Kumięga, and Dreesen 2012). The *dispositif* approach encompasses power and social structures (Bourdieu 2010), the nexus of power and knowledge (Foucault 1972) as well as institutionally organized processes of interpretation (Angermüller 2010). It takes CDA perspectives further, in that it pleads for studying social context empirically and systematically. Rather than leaving claims about social inequality to intuition, it asks for methodological symmetry: contexts should be studied just as systematically as texts. Moreover, for the *dispositif* analyst, context is not a social reality waiting as it were behind texts. It is an arrangement of social practices that not only represent the social reality, but by representing it constitute it.

Our plea for a combination of linguistic discourse analysis and sociological dispositif analysis responds to a demand for addressing questions of power and inequality in discourse research. While we agree with those interactional and praxeological discourse analysts who criticize structural approaches to discourses for subsuming the material under preconceived theories, we do think that power and inequality are questions that discourse analysts often need to address. Social structures can have an important effect on meaning making practices in society without being referred to explicitly, or even implicitly, in a given text or discursive practice. Indeed, how could one understand the implicit political messages of an academic publication, an OECD report, a New York Times article or the performance of a stand-up comedian if one filtered out the institutional setting and the broader power field in which it circulates? Yet, claims about broader institutional, social and historical contexts cannot be produced in an ad hoc way; they necessitate systematic theoretical and empirical scrutiny. We enter the debate on discourse and context from both a sociological as well as a linguistic point of view. Discourse analysis does not only include the study of linguistic characteristics of texts, symbols, icons, gestures and other forms of expression. It also requires the systematic empirical study of social contexts in which these linguistic forms orchestrate interpretation and create social meaning. However, the differentiation between text and context is one possibility among others that seeks to come to terms with this problem in discourse analysis. We take the opposition of text and context as an analytical starting point in order to argue for a methodological differentiation between the analysis of linguistic qualities (of, for example, texts) and the sociological study of contexts (for example, social structures and institutions). Whilst ‘discourse’ is understood as the combination of text and context, we keep both dimensions apart for analytical and heuristic reasons that become relevant in practical research processes (Angermüller 2004, 2006, Hamann 2014, Maeße 2010, 2015b).

## 1.2 Levels of discourse analysis

The discourse analytical process usually takes place at three different levels of empirical investigation, as outlined in Table 1. The first level deals with problems that are first and foremost linguistic in nature and located on the text level of discourse. At this stage, qualitative and quantitative methods are applied in order to analyse the formal rules that make linguistic forms (spoken words, written texts, gestures as well as pictures) readable in respective social contexts. Thus, the analysis of argumentation, deixis, categorizations, polyphony, co-occurrences and so forth requires the study of small utterances as well as large

textual corpora. The particular choice of method depends on the research question or on corpus characteristics. Nonetheless, the linguistic level must not be confused with the social contexts in which language appears in order to create meaning(s).

After the linguistic level, a sociological level emerges which cannot be studied with linguistic methods. At this point, the discourse analytical process moves from the first, the linguistic, level, to the second level of investigation: social context(s) (cf. Table 1). This switch from one level to another is required in qualitative as well as in quantifying approaches to textual materials. Large data sets and corpora as well as small utterances neither speak nor interpret themselves.

Table 1: Three levels of analysis

<i>Level</i>	<i>Example</i>	<i>Analytical goal</i>
Language	A book, a media corpus, an utterance, a corpus of utterances	Studying linguistic forms' deixis, co-occurrence, attribution etc. with quantitative and qualitative methods from discourse analysis
Social context	An academic discipline, situations such as a workshop, the national Higher Education System	Studying the social and institutional rules as well as social conventions
Theoretical interpretation	'Class struggle within academia', 'identity formations of researchers', 'functional differentiation of academic systems', 'face in academic interactions' etc.	Give explanations of data and build theoretical models of what is happening in society

As is illustrated in Table 1, the linguistic and sociological levels of discourse analysis are complemented by a third level – theoretical interpretation. Taken by themselves, neither linguistic nor contextual data are interpretations. Furthermore, the combination of discourse analytical data with data from sociological analysis is not an automatic and natural procedure either. Interpretations do not emerge from the data; they are made by those who interpret them. This is where the significance of the theoretical level of analysis comes into play. Researchers can mobilize theories and paradigms for the interpretation of data and they can build new theories and explanations on the basis of data interpretations led by theories. Whereas positivistic approaches follow a data-theory determinism, we suggest giving theory its place in research processes as a tool for data interpretation and as a result of those processes. Theory is simultaneously the creative starting point and the result of every

research process. It helps to make sense of data. While the theoretical level will be addressed in the fourth section of this contribution, let us briefly return to the contextual level.

The three levels of analysis can be observed in various types of discourse analysis. For example, if pragmatic discourse analysts ask how utterances are contextualised through markers of polyphony (Angermuller 2014), their analysis does not stop at the textual level. An example from economic expert discourses (Maesse 2015a) can show how an analysis of meaning making on the micro-level (of utterances) can be combined with the study of institutional contexts on the macro-level. The following exemplary statement was uttered by the economist Joseph Stiglitz. From a pragmatic point of view, small discursive units such as the following utterance can have effects in large political, economic and academic structures:

What is needed is a macroeconomic theory based on theories of imperfect competition and imperfect information. (Stiglitz 1992: 385)

The author provides us with linguistic material that can be studied with respect to the deixis of person, time and place. The utterance thus refers the reader to the context in which it is uttered by the locutor (i.e. Stiglitz). To make sense of this utterance, the reader will need an understanding of the locutor and their context. It will, therefore, be important to know that Stiglitz has been awarded a Nobel Prize, is an established academic at several Ivy League Universities, a popular commentator of economic policies and chief economist of the World Bank.

Yet, knowledge about the social context is not only important for this type of linguistic micro-analysis of utterances. As will become clear in the following, more structural approaches, too, articulate linguistic and sociological levels of analysis and integrate them into a theoretical explanation.

### 1.3 Accounting for social context

There is a variety of qualitative and quantitative methods that can be used to account for a multitude of social contexts of discourse (cf. Table 2). In sociology, quantitative methods are typically used to portray the ‘hard facts’ of social reality from a macro-sociological perspective that is interested in large-scale distribution. For instance, there is a tradition of comparing societies by analysing their social structures. Scholars draw, for example, on large data sets comprising birth rate, education duration and attainment, family size, income level, professional occupation and income differences. Bourdieu’s (2010) extensive study of taste differences between social classes is also based on such data sets taken from statistical

registries and large surveys. Sociologists with a qualitative stance have criticised the rigid corset of variables that cannot fully reflect the social life people experience.

The first impression from a discourse analytical perspective is quite similar: data on social or institutional structures are not very helpful when we are actually interested in discursive practices in the production of knowledge, meaning and subjectivity in different co- and contexts. We argue, however, that socio-structural data are indeed important for a better understanding of the social contexts and institutional power relations in which discourses emerge. Some relevant social contexts may betray more stable structures. They spread out over vast areas of the social world and their influence can only be detected on the macro-level. Among these 'hard facts' of social life one can discover, for example, stable institutional structures in which a discourse on educational reforms is embedded (Maeße 2010) or the socio-structural backgrounds of a university population that have an impact on how certain academic ideas are discursively constructed (Hamann 2014). Furthermore, it can be worth looking at the institutional context and practices of text production that reveal information on the influences on choices of topics, arguments and positions in, for example, election manifestos (Scholz 2010).

Data that can be analysed with quantitative methods are one suitable route to assess the structures in which a discourse is embedded. Such an approach enables us to analyse social phenomena that are spread over a relatively large geographical space, such as national higher education systems, and which concern relatively large groups, like disciplines or a population of professors. Furthermore, we are able to trace developments of social contexts that encompass discourses over relatively long periods of time. We can account for a large quantity of data in order to get an overview of the research object analysed before we actually start interpreting language-related phenomena in the discourse.

Accounting for social contexts of discourses will take into consideration four ideal typical and usually interrelated dimensions and, depending on the research question, their development over time: social relations (actors and their relations), institutional frameworks (organizations, bodies, entities and their rules), epistemic resources (ideas, concepts, tacit and biographical knowledge) and forms of social practice (field rules and their interrelations with other field rules) (cf. Table 2).

Table 2: Four ideal typical dimensions of social context for the analysis of discourses

<i>Type of context</i>	Social relations	Institutions and organizations	Epistemic resources	Forms of social practice
<i>Example</i>	Academic community networks, teaching relations, organizational hierarchies between deans and professors or professors and PhD candidates, relations between politicians, media journalists and academics	Universities, professorships, funding organizations, publishers, editorial boards, commissions, political parties, business firms, administrative offices and bodies	Rankings, tacit knowledge about certain institutions, scientific theories and methods, ideological knowledge, knowledge about political and economic organizations	Reading, writing books/ papers/ articles, presenting papers at big conferences/ informal circles, being involved in email communication and so forth

## 2. *Dispositif* as a heuristic concept for a context-centred discourse analysis

We suggest the concept of *dispositif* as a theoretical framework that can guide our interpretation. It is crucial for our argument that academic discourse – i.e. not only the research interests stated that we will discuss below but also, for example, theories, schools, sub-disciplinary specialisations – and the practices that constitute them – e.g. publications, talks, citations, mentoring, societal engagement – are not taking place in a social vacuum. Rather, academic discursive practices are embedded in social and institutional contexts. These contexts range from very specific settings in specific departments, archives or laboratories (Knorr Cetina 1981, Grafton 2011) to very broad and durable structures on a national or even global scale (Frank and Gabler 2006, Fourcade 2009). In addition, academic discursive practices are enforced and established in power relations. Power relations are expressed, for example, on the micro-level, where uncertain funding may influence scholarly practices, and thus encourage, or discourage, specific research interests (Morris and Rip 2006), on the meso-level, where departments that attract the majority of research funding have the resources to shape the image and development of a discipline (Hamann 2016b), or on the macro-level, where there is a social expectation that research has an impact on society (Maeße 2015a). After discussing methodological aspects, we now turn to the theoretical question: how can we combine the study of linguistic material and of social and institutional contexts and how can we conceptualize the multifarious relations between discursive practices and their contexts marked by power and inequality?

## 2.1 Three aspects of academia as a dispositif

Foucault's notion of dispositif provides a valuable starting point for this endeavour. The term dispositif describes the ensemble that discourses form with elements as heterogeneous as institutions, practices, rules and even architectural forms. In short, the focus of interest is powerful apparatuses that relate elements of "the said as much as the unsaid" (Foucault 1977, 194). This makes a dispositif a vital heuristic concept for the question of the relation between discourses and contexts.

Foucault's dispositif concept is well-suited to account for social dynamics in the academic world. Academic power relationships are often organised through a formal status hierarchy. But many are indirect and emerge from spontaneous interactions among academics. While language plays an important role in producing and reproducing the academic social order, any linguistic expressions that academics use are characterised by a certain interpretive openness. Their meanings depend on the contexts in which they are used. While meaning production is by nature excessive and 'recalcitrant', it is contained by institutional arrangements such as the academic dispositif. Meanings are homogenized, interpretations are smoothed out, ideas are domesticated through the interrelated practices, rules and resources of the academic dispositif (Angermüller 2010, 90-96). Conceptualising academia as a dispositif thus emphasises three aspects: power effects of closure and sedimentation, heterogeneous and overlapping contexts, and the discursive circulation of signs between academia and other fields (Maeße and Hamann 2016).

### 2.1.1 Power, closure, sedimentation

The dispositif concept reminds us that power is more than mere interpretative efforts describing power as an "open, more-or-less coordinated [...] cluster of relations" (Foucault 1977, 199). It emphasises effects of closure and sedimentation that are also part of the academic world. There are many examples where meaning making is domesticated and controlled in the academic world, think of the rhetoric of excellence and competition as well as discourses of inclusion and equality, the pressures for external funding and on university admissions (cf. Zippel 2017, Münch 2014, Friedman, Laurison, and Miles 2015, Kennelly, Misra, and Karides 1999).

### 2.1.2 Fields as heterogeneous arenas

Conceptualising academia as a dispositif emphasises a second aspect: academic contexts are complex and heterogeneous arenas that overlap with other arenas. Foucault (1977, 199) calls

for “a grid of analysis which makes possible an analytic of relations of power”. However, an analytical grid for the power relations that encompass discourses and contexts was not systematically developed by Foucault. Thus, we would like to draw attention to a framework that already exists for the analysis of social power in specific arenas: Bourdieu’s field theory of symbolic production (Bourdieu 1988, 2004). Combining Foucauldian and Bourdieusian approaches allows us to account for the various effects of closure, stratification and sedimentation that we highlighted in the previous paragraph. It also provides a hypothesis for the relations between discourses and contexts by suggesting a structural similarity between the positions within a field and the statements made from these positions (cf. Figure 3). The main reason for combining Foucauldian and Bourdieusian approaches is, however, that it allows for a sophisticated approach to institutional and social contexts of discourses. Rather than remaining diffuse and opaque, contexts are elevated to a main object of investigation. Understanding them as fields enables us not only to grasp the disparity and asynchrony of different contexts, but also to relate various social logics, structures and practices to each other (cf. Bourdieu 1983, 1996). Our *dispositif* approach links both perspectives: the field perspective emphasises the dimension of social and institutional power while the discourse perspective incorporates linguistic practices of interpretation and translation.

### 2.1.3 Discursive circulation and interpretation

Conceptualising academia in this way further underscores a third aspect. It highlights that discourses play an important role because they give social actors the opportunity to act in an open field, as well as enabling discursive circulation throughout many fields between academia and society. Academic discourses span academic and other societal contexts because they consist of signs that can be interpreted differently in various contexts. In linguistic terms, signs are material carriers of multiple meanings. They open up a multitude of meanings that are subsequently closed again by specific interpretations. This is why academic discourses can be simultaneously embedded into interrelated academic and other societal contexts. For example, a journal article in a science discipline might represent a discovery that is translated into a patent in the judicial context, and into research cooperation with enterprises in the economic context. In the social sciences and humanities, other contextual trajectories are more likely. A publication could be interpreted as a theoretical position that matches a certain climate in the political context (Lamont 1987, Angermüller 2015), or as an insight that is picked up by media outlets that interpret the sign in terms of expertise (Maeße 2015a). Signs that are interpreted as symbolic academic capital in the academic context may

traverse into judicial, economic, media or political fields, where different actors charge them with different meanings. The research that emerges from these positions would have to traverse from the academic into a number of other societal contexts.

In order for discursive utterances in Foucault's sense and capital in Bourdieu's sense to make sense and mean something, the material sign as a carrier of meaning has to coincide with the meaning it generates in a specific context. The material form of utterances is a prerequisite in order to generate meaning, just as the form needs a context in order to refer to something meaningful. Our dispositif theory does not describe the circulation of meaning (or capital) since meaning is the product of using language. What circulates is not meaning, but text and talk that are charged with meaning in various contexts (cf. Beetz 2016, 82-88). The semiotic substantiation of our nexus of discourse – dispositif – field allows us to treat discourses as distinct social entities that are neither above nor subordinated to their contexts, but embedded in them.

Our heuristic toolkit will now allow us to understand, first, how elements of academic discourse – for example, a journal article that presents a particular approach – are embedded in academic and other contexts, e.g. when they are picked up by researchers from other sub-fields, or when they influence political debates. This requires, second, that we understand how these discursive elements are produced in the context of an academic field, equipped with a specific academic meaning and re-interpreted when they travel into other fields.

### **3 How to use sociological data in discourse analysis?**

So far, we have outlined the importance of the linguistic, contextual and theoretical levels of discourse analyses. In the following two sections, we will explain how socio-structural sociological data about institutional contexts of discursive practices can be articulated with discourse analysis in order to study the discursive construction of social order, here for example in an academic discipline. We will draw on empirical examples from an information system that has been built for this purpose in the ERC DISCONEX project. The information system aims to provide sociological information about institutional and epistemic contexts of academic discourses. With this goal in mind, we have produced quantifiable data that can inform us about larger social structures in which discourses emerge. Such an analysis of the macro-structures of the social context helps to decide and justify which particular cases of discourse production should be chosen for a more thorough analysis with qualitative methods. Therefore, we do not understand quantifying methods in terms of a positivistic approach to discourse, but as a means to explore and discover. For our discourse analytical

perspective, quantifying methods are a useful heuristic tool, which is followed by a more fine-grained analysis (Kleining 1994). In the first part of this section, we will give an example of a data set that informs us about social contexts of a discourse. Second, we will explain how we use such data for the purposes of discourse analysis. Thereby, we will further develop the theoretical framework for a context-centred discourse analysis.

### 3.1 Mapping social contexts with statistics: actors, institutions, organizations

In order to map the contexts of discursive practices, our first step is to assess the relevant actors within and outside academia. The social contexts of academic discourses consist of, for example, researchers, institutions like universities, publishers and funding agencies, as well as disciplines, research groups and networks. In a broader sense, these are all actors that, in one way or another, participate as social entities in an academic discourse, no matter whether they are individual or collective, human or non-human. Hence, the first step in our analysis is to identify the discourse actors that are relevant for the discourse we want to study. This can be done via a systematic investigation of the institutional structures of our research object. In our case we catalogued all national higher education and research institutions that are relevant to the academic discourse in a particular research field together with the full professorships in each institution. In addition, we also tried to account for higher education policies effecting the classification of universities. In the UK case, classificatory instances that are part of the higher education dispositif include, for example, such groups as the Russell Group and European Research Universities, and also governance instruments like the Research Excellence Framework, with its highly influential focus on research excellence and societal impact (Hamann 2016b). The importance of these classificatory instances notwithstanding, our approach in the project is more focused on the individuals in higher education institutions, the way they position themselves, are positioned by others and the career trajectories they have followed.

There are numerous other methods to identify the actors or participants of a particular discourse. For academic discourse, citation analysis has become the preferred approach in order to map the structures of scientific communities (e.g. Estabrooks, Winther, and Derksen 2004, Xu and Boeing 2013), and concept-mapping has been applied to identify how different actors in a cross-disciplinary context conceptualise their research area (Falk-Krzesinski et al. 2011). Below, we will illustrate how a mapping of the positions of discourse participants can be produced with Correspondence Analysis by contrasting the distribution of all the words used in their texts.

Taking the example of academic discourse, the mapping of contexts should not only enable us to identify relevant actors, it should also help to locate researchers institutionally and epistemically based on their professional activities. We distinguish, as suggested in earlier studies (Angermuller 2013, Whitley 1984), between an institutional world where researchers can occupy posts in the organizational hierarchy of academia and an academic world where researchers can occupy positions in academic communities and become references over knowledge horizons. In Bourdieu's (1988) terms, this means that, in order to build up a meaningful, intelligible position in academia, a researcher needs to draw on two types of capital. S/he needs institutional academic capital in terms of worldly power that is created, acknowledged and accumulated, e.g. in committees, councils and on boards, and s/he also needs symbolic academic capital in terms of prestige, recognition and accolades that are awarded by peers.

In this paper we will focus on a synchronic view of the academic world. In addition, however, we are interested in diachronic developments of researchers' locations. This view of trajectories is first and foremost concerned with researchers' biographies – if possible going back to their social origins, tracing their careers by systematically collecting information on researchers' educational pathways and the institutions they have gone through and the positions they have held in the course of their careers (cf. Hamann 2016a). For the quantitative analysis of such data, Sequence Analysis is one route to follow (Blanchard, Bühlmann, and Gauthier 2014).

### 3.2 Challenges and potentials of context data

We propose to analyse data pertaining to institutional backgrounds in which a discourse is produced, and to the biographical data of discourse participants that can actually be held responsible for the texts produced within a discursive formation. Both institutional and biographical context data can be analysed from a diachronic and synchronic perspective, which results in different challenges and potentials.

Biographical information on researchers' administrative positions, teaching, media activities and non-academic as well as research-related activities, for instance, allows us to delineate how these various activities influence particular research and academic discourse in general. Furthermore, it might be interesting to see which activities become important at which points in a career (cf. Ćulum, Turk, and Ledić 2015). By collecting data on publications and collaborations, we can find out more about the social networks within the community of a particular research field. Also, such data help to study institutions through the prism of their

researchers: how is an institutional framework reflected in the writing of its researchers? Which institution has the most diverse research interests, with the greatest range of transdisciplinary research interests, with the most cited researchers, with the most and largest grants etc.? One objective of exploring the institutional background can be to identify hubs for particular research interests and theoretical approaches. With methods like Correspondence Analysis, we are able to find out more about the transdisciplinary contacts between research fields and disciplines. Additionally, it is possible to observe trends in research fields from a diachronic perspective.

However, these potentials notwithstanding, institutional structures, research infrastructures, affiliations and career progress differ substantially in different countries (Angermüller 2017, Paradeise et al. 2009). Hence, developing a grid of categories accounting for the institutional and social reality of the academic world in various countries is anything but straightforward. For our example, it is important to note that France has a more centralized academic system, the system in the UK is less centralized though many resources are still concentrated in Oxford-, Cambridge- and London-based institutions, while German higher education and research institutions have more autonomy and are usually dependent on individual states [*Länder*].

Moreover, in order to account for the context of the academic discourse in different countries, the institutional working conditions under which research is conducted can add an important analytical dimension. For instance, in contrast to Germany or the UK, there is an institutional distinction between research and teaching activities in France. This French peculiarity does not exist in many other countries. Research is organised by discipline in trans-institutional laboratories according to particular fields of research. If they are not working for the National Scientific Research Centre (*CNRS*), researchers have to teach at a university. There is a national body (National Council of Universities [*Conseil National des Universités – CNU*]) that classifies these researchers and allocates their work to one of the currently 87 sections corresponding to fields of research. After finishing a PhD, a researcher pursuing an academic career would normally try to become qualified by the CNU, and then apply for a permanent civil service position. Their counterpart in Germany would have to be happy with a renewable contract. In case they do not qualify for a professorship after 12 years, they risk their academic career coming to an end (Law on Temporary Employment Contracts in Sciences [*Wissenschaftszeitvertragsgesetz*]). Through the prism of the dispositif approach, we consider such institutional differences as part of the power structures establishing the social context in which processes of text production in academic discourse play out. An analysis of

these institutional social contexts will help to discover and interpret socially induced features on the textual level of academic discourse.

### 3.3. Examples of statistical categories

A context-centred study of academic discourses can be based on publicly available information about the positions, careers and activities of researchers and their institutions. For smaller research projects, such data can be collected in spreadsheets. For more complex studies, however, it might be worthwhile creating a system into which data can be fed manually (e.g. from online CVs) and automatically (e.g. from literature databases). In the case of the DISCONEX project, we created an information system that comprises socio-institutional and biographical data. All data were taken at face value, as presented in their sources. Hence, categories that were used in the data sources are reproduced in the database. In this way we hope to account for the concepts and labels that the actors believe to be important in the social and discursive arena in which they aim to position themselves. Of course, in research practice, this ideal has some pitfalls that have to be tackled. For instance, universities, degrees and even countries change names. In order to ensure the continuity of the reference labels in the information system, old and new names have to be linked to each other. This is by no means an innocent step because we are intervening in the game of names and their meaning that is at the heart of questions on discursive construction, which we are actually interested in.

The quantitative analysis of these data aims to reveal aspects of the social structure and dynamics of research fields. Why would discourse analysts be interested in such questions? The answers help to understand the social and institutional context to which discourse participants have to respond implicitly or explicitly if they want to produce a meaningful statement in a particular discourse. We assume that discourse practices relate – in one way or another – to these context conditions. Thus, a discourse analysis that integrates context data can enrich the interpretation of textual data with information about institutional and societal conditions that are usually not obvious merely by studying text data.

What we propose here is a first step towards the systematic acquisition and study of such data whose results would still have to be articulated with the (quantitative and qualitative) text analytical methods that are widely used in discourse analysis. In terms of a context-centred perspective, this will help to better understand why a certain type of research, colluding with particular statements and narratives, occurs in particular institutions and locations. In this sense, we could integrate into the analysis of academic discourses, for example, the impact of

research and funding policies on the research landscape, and the topography of a field of research.

In order to conduct integrative studies, we propose to collect ‘hard data’ a) on institutions, b) on individuals and their career trajectories in those institutions, and c) on the professional networks of these individuals.

- A. The following information about departments as well as the research interests of the senior research staff allows locating *research hubs*:
1. Institutions or groups of institutions (e.g. *League of European Research Universities*, *Russell Group*) with a high number of researchers in a field;
  2. Mappings of research interests on the institutional, disciplinary and national levels;
  3. The publication types and journals in which researchers with particular research interests publish predominantly – e.g. one might find that German economic sociologists publish more books than journal articles when compared to their British colleagues; or that corpus linguists from the University of Lancaster publish their articles in a particular journal that differs from the publication preferences of their colleagues at the University of Birmingham.

Furthermore, the enquiry into biographies can help to understand whether particular institutions and/or disciplines prefer individuals with a particular social or career background. By systematically recording *education and career trajectories*, we might, for instance, identify those institutions, disciplines or research fields in which researchers have typically a migrant, working class or elite background etc.

- B. The following information on education and career steps collected from the CVs of research staff allows identifying typical and atypical *career trajectories* in different fields, disciplines and countries:
1. Ages and biographical backgrounds of researchers in a field (in future projects this might be completed with information on the social backgrounds of researchers);
  2. The average time spent in each career stage in a respective field and country;
  3. The average time needed to become a professor in a certain field, discipline and country;
  4. The number of institutional positions held until professorship is reached in a certain field, discipline and country;

5. The typical and less typical activities of researchers in a particular research field until achieving professorship;

In terms of a discourse analytical perspective that focuses on institutional contexts, this information helps to illustrate the similarities and differences in career trajectories between different fields of research as well as countries, relations between career progress (seniority) and particular activities (number and quality of publications, acquisition of research funding, administrative activities/ positions in the higher education institution) or the conditions for a change of research interests in a career, amongst other things.

C. Finally, information on collaboration in research projects and publications can be used to study the professional networks of individuals in institutions. With the help of *social network analysis*, we could investigate such questions as:

1. Co-authorship;
2. Who publishes in the same journal, or with the same publisher?
3. What are typical or less typical text-types that are published in a discipline or a particular field of research?
4. Citation analysis: social networks of citing researchers in a particular field.
  - Who are the most cited researchers in a field of research?
  - Do they come from a certain type of institution?
  - Relation between seniority and citation frequency: are researchers in senior positions cited more than junior academics?
  - How important are early career contacts in citation patterns?

In terms of a context-centred discourse analytical perspective, this information facilitates a social network analysis mapping the social and institutional contexts of academic discourses. Once we have collected a data set according to the research interests outlined between A 1 and C 4, we can produce data queries that correspond to these interests. A results report is basically a spreadsheet containing variables and data, which will then have to be analysed and visualised with statistical software. In the following section, we will give an example that focuses on the research interests of full professors in UK sociology departments.

#### **4 Example: research interests as an entry point for a context-centred analysis of academic discourses**

Based on the analytical framework developed in the previous sections, the current section will outline what a quantifying exploration of social contexts could look like. In doing so, we

will address the empirical questions posed in the introduction: How can we account for the discursive construction of social order in the academic discipline of sociology? How do social relationships of difference and inequality that constitute the sociological field go together with the linguistic organisation of the field, i.e. a specific distribution of words and expressions across the social space? The aim of this section is to demonstrate a method that can help to get an idea about the macrostructure of academic discourse in UK sociology based on research interests. Ideally, this analysis of the institutional context of academic discourse and its structure should help to explain hierarchies and power relations. The division between central and periphery institutions that this section reveals on the level of research interests could help to explain the manifestation and sedimentation of symbolic and/or economic capital that these institutions accumulate in evaluation procedures, such as the Research Excellence Framework or various other rankings – an analytical step that we allude to in the last section of this text.

As an example of how to use quantitative methods as a heuristic tool for a qualitative analysis of discourse data, we explore one dimension of academic discourse, the research interests that individual full professors display on their homepage profiles in sociology departments. In a more thorough analysis, other data sets could be integrated depending on our research question. For the sake of illustration, we only represent one of the numerous methods that could be applied. In a second step, which we won't be able to present here, we could further investigate the similarities in academic discourse of those institutions grouped by our method in one cluster. With this exemplary study we aim to identify the research hubs of various research fields in a given discipline and country – in this case, UK sociology. With the help of Correspondence Analysis we are able to create maps that present those institutions on whose webpages we find similar research interests and keywords close to each other, whereas differences in terms of research interests are represented by greater distance on the map.

#### 4.1. The corpus and method

For this study, we compiled a trial corpus with texts of research interests and keywords that full professors at 76 UK sociology departments present on their institutional webpages. There are more than 90 sociology departments in the UK, but not all of them have full professors on their staff. We consider full professors to be preeminent stakeholders in academic discourse and therefore the analysis of their data is the starting point of our study. The corpus was partitioned in such a way that we could compare research interests on the institutional, disciplinary and national levels. With a size of 11,980 tokens, our corpus of UK sociologists

is quite small. However, it is big enough to present the method and its potential for future research. The corpus has not been lemmatised and also includes all grammatical words. Our choice is based on the assumption that different grammatical forms of content words and grammatical words themselves have a particular influence on the meaning construction for what we want to account for in our analysis.

We analyse our data set with Correspondence Analysis. This is a statistical method to simplify complex multivariate data by grouping entities under investigation according to corresponding features. In classical empirical social research the method has been used to group actors according to similar occupations and dispositions (Bourdieu 2010), in discourse analysis the approach has been used to group speakers according to corresponding features in their language use. In this sense, it is a powerful method to discover similar language use of different speakers in particular time periods by taking into account the complete vocabulary of a given corpus and comparing it according to the partitions introduced. In this study, we took the partition ‘institution’ and we contrasted the distribution of all word tokens used to express research interests on the website of a given department of sociology in the UK with it. To the extent that the method takes into account the entire vocabulary of a corpus, it is a corpus-driven (Tognini-Bonelli 2001) heuristic approach for the analysis of language use. It was first developed in France in the 1970s within the lexicometric approach to discourse (see Chap. 5).

Applying Correspondence Analysis to text corpora is a way of visualising similarities and differences in language use by projecting words into an at least two-dimensional visualisation (Bécue-Bertaut 2014, Benzécri 1980, Husson and Josse 2014, Lebart and Saporta 2014, Salem 1982). There is now a range of lexicometric tools that offer Correspondence Analysis, e.g. LEXICO3, HYPERBASE and IRAMUTEQ. However, for this text we used the software TEXTOBSERVER, developed at the CEDITEC laboratory, University of Paris-East. This tool provides maximum flexibility in terms of the integration and exclusion of corpus parts into the analysis, which can be helpful to understand the impact that certain corpus parts have on the visualisation.

Correspondence Analysis applied to text corpora is based on a table of the distributions of word token frequencies (rows) in different corpus parts (columns). In our case, one can find in the first column of this table all the word tokens of the corpus. All other columns are named after the location of the university from which the texts of the corpus originate. The rows of these columns contain the frequencies of the word tokens they refer to in the texts of a particular university. In simple terms, the method can be described as an algorithm

grouping together those words with similar distributions across different universities (columns). Figures 1 and 2 serve purely didactic purposes – they are not readable as such. However, they demonstrate how the words of a given corpus are taken into account and visualised according to their distribution profiles. By distribution profiles, we mean a similar high or low distribution of a group of the same word tokens across different institutions (columns). The word tokens of such profiles are positioned close to one another.

In Figure 1, the words in blue refer to keywords used by professors in UK sociology departments. The blue dots refer to the positions of word tokens calculated with an algorithm comparing the distribution of all word tokens across the columns. In Figure 2 the words in red refer to the locations of the universities from which the texts were taken (column names). Their positions are calculated based on the positions of the blue dots. The names of columns with similar distribution profiles are placed close to one another, whereas those with very different distribution profiles are more distant from one another. The axes are situated alongside the highest concentrations of similar characteristics (here similar frequencies of the same words in different institutions). Deciphering the meaning of the axes is part of the interpretation process, which often needs further analytical steps using different methods.





understood as the semantic realm triggered by the referential meanings of certain words. However, the interpretation of a Correspondence Analysis based on textual data is never straightforward because it is based on lexical items, not semantic units. The problem is that the same semantic can be expressed with different words or variations of words. In this sense, the method tends to analyse the style of speech that has a semantic dimension, even though it cannot be reduced to a pure analysis of semantic worlds. Hence, the distances represented on the axes could originate from solely lexical or solely morphological differences, or a mixture of the two. In this sense, we have to be prudent with the claims we make on the semantic level. In order to verify our claims we can use concordance analysis, or other methods that allow direct access to textual data. Regardless of the outcome of such verification, we can be sure that the method reveals dominant tendencies in the style of speech within texts from the different corpus parts introduced (here, texts from different institutions).

Thus, Figure 3 will help to understand which institutions are closely related to each other in terms of the research interests of their professors. At this point we have to acknowledge that the visualisation seems to imply that the authors of the texts – UK full professors in sociology – represent the research interests pursued at the particular universities they work for.

Moreover, one has to take into consideration that there is no direct correlation between the distance of keywords and their frequencies in the text of an institution. For example, in Figure 3, *poverty* is relatively close to *Bangor* (2<sup>nd</sup> quadrant). However, the word-form *poverty* does not occur in texts taken from the University of Bangor – but it does occur in the text taken from the University of Bath, which is displayed closest to Bangor. These two are located close to one another because of the similarities of their distribution profiles throughout their texts. Yet, this does not mean that the vocabulary in the texts of both institutions is identical, and so particular words can be missing in one or other part. Hence, some words, such as *poverty*, do not occur in both text collections. Thus, we should concentrate interpretation of the visual on the similarities of institutions and less on particular cases of vocabulary contributing to the visualisation: the texts used at Bangor are most similar to those used at Bath and Belfast. The keywords displayed in Figure 3 can help to give us a general picture. For the interpretation, we should try to identify general common features in the words displayed in a particular realm of the visualisation. In trying to understand Figure 3, we should also direct our attention towards the meaning of the axes. In order to interpret these, we can look at the most extreme cases on both axes. The most extreme cases on the x-axis are the University of Aberdeen and the University of the West of England (UWE Bristol). On the left side of the x-axis we see notions such as *societies*,

*European, Europe, digital, death.* On the right side of the x-axis there are notions such as *governance, power, failure, education, employment, technologies, practices* and others.

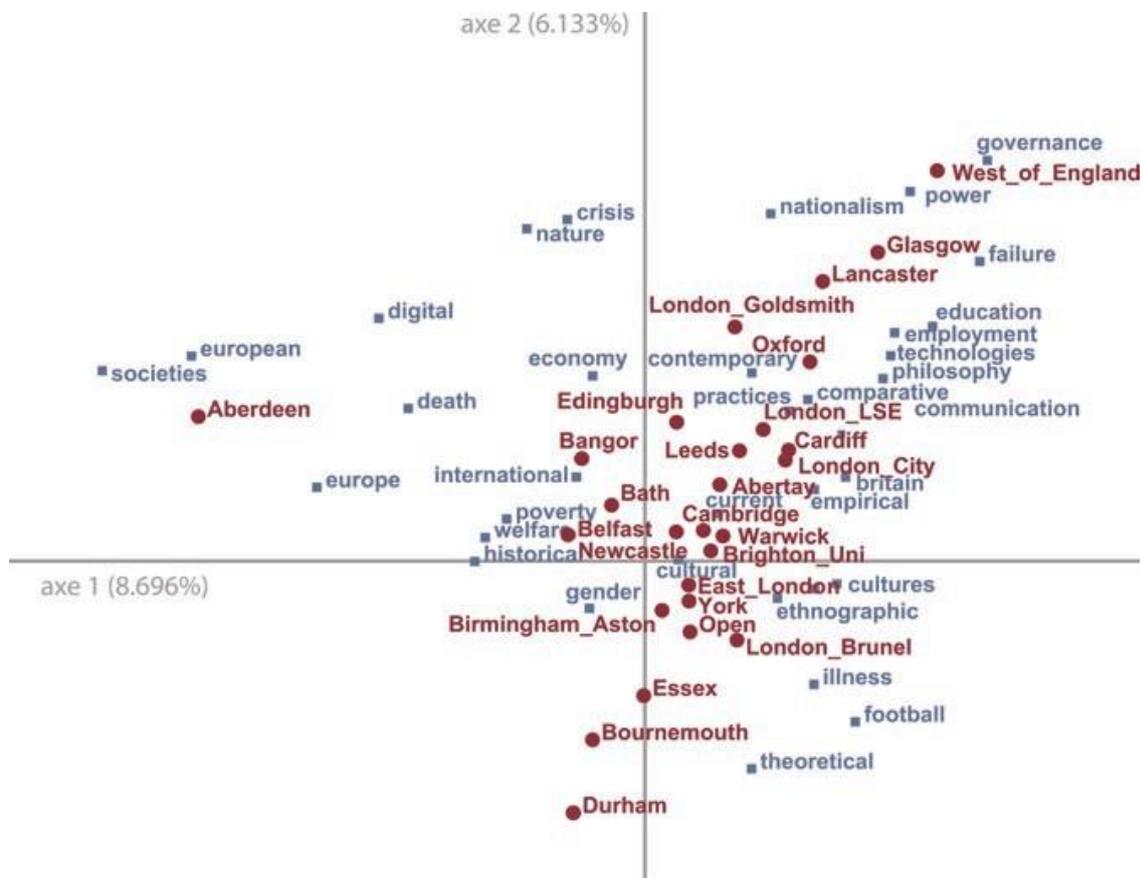


Figure 3: Correspondence Analysis of keywords and research interests represented on the websites of professors in sociology departments in the UK

Ideally, we would now be able to relate the visualisation to the social world – the academic world that they were taken from. Once we integrate the complete list of all word-forms contributing to the position of a data point (not represented for reasons of readability), we can interpret the x-axis as follows: on the left side of the x-axis we find institutions at which researchers present their work in terms of an external perspective of their discipline: they refer predominantly to different topics of the discipline, internationality and interdisciplinarity on their websites (*psychology, geography, Europe, international* etc.). In contrast, on the right side, researchers present their work from more of an internal perspective of their discipline. They emphasise the way they do sociology (*comparative, ethnographic, empirical, theoretical*), whereas the international aspect remains largely unaddressed by focusing on national British questions (*Britain, nationalism*). While on the left side we have

more problem-driven topics, such as *death, crisis, poverty, welfare*, on the right side we find, with some exceptions (*illness, failure*), more applied topics that ask for affirmative solutions (*communication, education, governance, employment*) and stress technological and/or scientific aspects of society, such as *corporate power, regulation and governance of health technologies, regenerative medicine, Science and Technology Studies*.

Most universities are situated around the origin of the co-ordinates, which in comparison with the rest of the corpus represents the corpus parts with the least specific distribution of the vocabulary. We can also say that researchers at these institutions use vocabulary that is used most frequently – and thus may represent the mainstream of UK sociology departments. Such terms include *culture(s), gender, identity, racism*, but also references to time, such as *current* and *historical*. The fact that these institutions are situated in the centre could also mean that they use terms that can be found on both sides of the x-axis and also the y-axis to a similar extent. Meanwhile the y-axis seems to represent a continuum between research interests emphasising a rather critical attitude at the bottom and research interests that are presented in a rather concise and neutral style at the top.

#### 4.2. Limits of and obstacles to interpretation

With regard to the limitations of our interpretation, we have to admit that texts from the genre that we are looking at are by their nature very short. Thus, the outliers in Figure 3 may also result from the fact that there are only very few researchers, and hence particular research interests that differ greatly from the ‘mainstream’ situated around the origin. A bigger corpus might help to sustain the hypothetical results that we generated at this stage. These limitations notwithstanding, the visual illustrates a method that could be used to integrate the data on institutions into a discourse analysis.

The advantage of using this somewhat imperfect corpus is that the corpus parts are of a size that we can manage to read. We gain a better understanding of the method by simply reading the closest and the most distant texts (Bangor, Bath, Belfast and Aberdeen versus Glasgow and Bristol (UWE)). The disadvantage of the relatively small corpus size is that changes in the visual might be quite substantial if we add or remove texts of researchers from these institutions. At any rate, we do not claim that these visuals represent a positivistic depiction of ‘the reality’. Rather, through the prism of Correspondence Analysis, we get a vague idea about hidden relations that are not visible in academic texts, the aim being to find out about relations that could be relevant either on other levels from subsequent investigations with other variables, or on the discursive level itself.

Suppose that we somehow had ‘complete’ data, we could relate these results to studies that map, for instance, the level of access of UK institutions to research funding in general, or to funding for research on particular topics. This would allow us to cluster institutions with a similar level of access to research funding, and subsequently analyse to what extent these clusters match the maps that we produce based on research interests. We could also include other data, e.g. on the permanence and duration of positions across institutions, disciplines and countries, in order to investigate the impact of such variables on academic discourse in the short and long term.

Given adequate data, the analysis of social contexts becomes a powerful supplement to discourse analytical approaches. This section has demonstrated an exemplary starting point for such an undertaking. The remaining question is connected to the third level of analysis (cf. Table 1), the theoretical interpretation of linguistic and social context data. In the following section, we will suggest a theoretical framework that integrates the linguistic and sociological dimensions of discourse analysis.

## **5 The heuristic potential of the *dispositif* approach**

The linguistic and sociological analyses of data that we have sketched out in the previous sections can help us find out about the institutional and discursive structures of research fields. But neither the linguistic material nor the collection of sociological data can account for the social organisation of academia.

In this section, we propose a *dispositif* theoretical approach in order to go beyond the opposition of micro and macro, social structure and discursive practice. The *dispositif* analysis we propose would read statistical data pragmatically and reflexively. We take them as a starting point for further investigations into an empirical object that resists simplification. We point to three aspects of academia as a *dispositif*: a) we emphasise a rather structuralist notion of power that yields effects of closure and sedimentation in academia, b) we emphasise that academic contexts are complex and heterogeneous arenas that overlap with other arenas, and c) we emphasise that discourses play an important role because they give social actors the opportunity to act in an open field, as well as to enable discursive circulation through many fields between academia and society. As highlighted by the following sections, all three aspects are addressed by the *dispositif* concept.

Let us illustrate the heuristic potential of a *dispositif* theory that guides the analysis of academic texts and contexts. Coming back to our empirical example of full professors in

sociology in the UK (cf. section 3), the three aspects of our *dispositif* approach generate the following analytical perspectives: First, we have argued for a rather structuralist notion of power that emphasises the effects of closure and sedimentation (cf. Section 2.2.1). What (more) can we take from Figure 3 if we follow this argument? The specific distribution of sociology departments in terms of the research interests of their professors might tentatively be interpreted in terms of a centre and a periphery. Departments at the centre of the field, including many London-, Oxford- and Cambridge-based institutions, and Warwick, could represent a thematically coherent core of ‘top’ departments. Anchoring this assumption with additional data would enable us to test whether these departments are also ‘competitive’ in terms of funding. Professors at departments on the periphery appear to be pursuing alternative research strategies that do not represent the ‘core interests’ of the field.

Second, the *dispositif* theoretical framework introduces fields as a main object of investigation, thus allowing for a systematic account of different contexts that overlap with each other (cf. Section 2.2.2). Following this argument, the distribution in Figure 3 can be understood as a field, as a power-soaked arena in which professors and departments struggle for scarce resources. A sophisticated notion of contexts as fields allows us to investigate phenomena such as the specific resources that the actors in Figure 3 are actually competing for. It also allows us to consider – and distinguish – other contexts that overlap with the field of UK sociology and influence it with their specific logics. Interdisciplinary research interests could then be interpreted as influences from other academic fields, while applied research topics that demonstrate an interest in, say, health technologies, could be interpreted as intrusions from respective industry sectors that overlap with the academic sphere.

The third aspect of our *dispositif* framework (cf. Section 2.2.3) highlights discursive circulation through academic and social fields. We argue that this circulation is possible because academic discourses consist of signs that can be interpreted differently in various contexts. Coming back to our empirical example of full professors in sociology in the UK, this insight allows us to follow the products of specific research interests throughout different contexts, and to study how they are interpreted differently in their respective contexts. For example, a research interest in ‘poverty’, as displayed in Figure 3, might not only result in a publication in an academic journal, but also in policy advice. While the journal article would be interpreted in an academic context, and thus in terms of its contribution to the state of research, the policy advice that results from the research would be interpreted in a political context, and thus in terms of its practical feasibility and party political implications. Eventually, one would be able to track the discursive circulation even further and study not

only how poverty research turns into policy advice, but how policy advice in turn circulates in the judicial field where it is interpreted in terms of new welfare policy legislation.

## **6 Conclusion**

We have highlighted some shortcomings of text-centred conceptualisations of context and pointed out the necessity for a more systematic integration of social contexts and a theory-based interpretation of discourses. Taking the example of academic discourse, we have identified sociological aspects that, from our point of view, are of importance for a more comprehensive understanding of how discourses shape the social and are shaped by them. Correspondence Analysis was presented as a possible starting point that can help to articulate sociological data with discourse analysis. In the example presented, we produced a map of the field of academic discourse in terms of institutions and research interests. In a follow-up study, we could translate keywords and research interests into one language in order to create a cross-country mapping of research interests related to institutions. This would help to better understand the interconnectedness of research fields across national borders. We hope to be able to interpret such visuals more thoroughly once we have a deeper knowledge of the material and the institutional context we are studying. In order to better understand how *dispositifs* influence academic discourse, we would also have to take into account other variables producing other maps of the academic world. We would have to look at funding infrastructures, social networks, the social backgrounds of researchers and their career trajectories. Such explorations would help, for instance, to identify centre and peripheral institutions in terms of research interests. They would help us gain better insights into the social dynamics of academic discourse. In the long term, we could also study how these mappings change over time: Are there certain institutions that display consistently a stable conglomeration of research interests? How and depending on which conditions do research interests change over time? Embedded in a social theory framework, the operationalisation of the *dispositif* concept will help to capture non-linguistic aspects of discourse that can complete the linguistic data and enrich the analysis of discourse.

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