

## Becoming a scholar by publication – PhD students citing in interdisciplinary argumentation

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### Abstract

**Purpose** – The purpose of this paper is to analyse scholarly subjectivity in the context of citation practices in interdisciplinary PhD research.

**Design/methodology/approach** – The paper provides an analysis of longitudinal series of qualitative interviews with PhD students who write scholarly articles as dissertation components. Conceptualizations of subjectivity within practice theories form the basis for the analysis.

**Findings** – Scholarly argumentation entails a rhetorical paradox of “bringing something new” to the communication while at the same time “establishing a common ground” with an audience. By enacting this paradox through citing in an emerging interdisciplinary setting, the informants negotiate subject positions in different modes of identification across the involved disciplines. In an emerging interdisciplinary field, the articulation of scholarly subjectivity is a joint open-ended achievement demanding knowledgeability in multiple disciplinary understandings and conducts. However, identifications that are expressible within the informants’ local site, i.e. interactions with supervisors, other seniors and peers, are not always expressible when negotiating subject positions with journals.

**Originality/value** – This paper contributes to research on citation practices in emerging interdisciplinary fields. By linking the enactment of citing in scholarly writing to the negotiation of subject positions, the paper provides new insights about the complexities involved in becoming a scholar.

**Keywords** – interdisciplinary research, information practices, citation behaviour, subjectivity, PhD research, scholarly communication

**Paper type** – Research paper

## Introduction

Doctoral writing is a process of becoming and belonging (Green and Lee, 1995; Kamler and Thomson, 2008). By positioning themselves in the text, and by developing diligence in the use of information within their fields, PhD students become subjects within the practices and discourses of research (Green, 2009). Today, contemporary policies promote the interdisciplinary scholar as an ideal academic subject (Weingart, 2014, p. 171), emphasizing the incorporation of theories, methods or methodologies from different disciplines as a prerequisite for knowledge production and innovation for current societal challenges (Madsen, 2018). Meanwhile, educators leave the development of researchers' subjectivity in interdisciplinary settings unaddressed (Lee and Boud, 2009). In settings where students have to build their work on more than one discipline or field of research, "the responsibility is left with students to integrate the disciplinary approaches presented to them [...]" (Holland, 2008, p. 14). This paper reports from an explorative, qualitative study of a group of PhD students engaged in citing the work of others in efforts to strengthen their arguments. The paper addresses the hitherto little explored complexities at work in the formation of researcher subjectivities in emerging interdisciplinary fields.

Garfield (1980) stressed that citations are key to intelligible communication amongst scholars and listed fifteen reasons for citing (1996), including "paying homage", "criticizing previous work", and "substantiating claims". Citing the work of others is thus a central aspect of argumentation (cf. Carrascal, 2014). In traditional argumentation theories, an argument is assessed by its generic structural properties. Qualities of inferences made, such as validity, plausibility or relevance, were evaluated by the relationships between premises and claims or conclusions. We take a different starting point and see argumentation as rhetorical practices of persuasion (Latour and Woolgar, 1986), which engage interlocutors in negotiations within scholarly communities (Pera, 1994; 2000). We sympathize with the view of sociologists of science that the use of citations as rhetorical devices is relative to situations. Furthermore, we see citing as a social practice (Schatzki, 2002; Halkier and Jensen, 2011), making the rhetorical agency less a matter of conscious strategic action and more a matter of performing argumentation by the understandings, rules and normativity through which citation practices are configured.

Furthermore, the tendency to explain information users by their field- or community-specific subjectivity seems increasingly problematic. Lee and Boud (2009, p. 97) argue that when scholarly practices occur in interdisciplinary settings, this changes the preconditions for the traditional view of PhD studies as 'socialization' into a field. The ways these preconditions are conceived, however, depend on how we conceptualize interdisciplinarity. Interdisciplinarity is typically defined as a mode of research that integrates "(1) perspectives/concepts/theories, or (2) tools/techniques, and/or (3) information/data from two or more bodies of specialized knowledge or research practice" (Porter et al., 2006, p. 189). It is assumed "that integration necessarily can and should be a regulative ideal" (Klenk and Meehan, 2015, p. 160). Klein, for instance, describes integration as a process whereby "differences in disciplinary language and worldview" (Klein, 1990, p. 189) become subsumed by "an integrated framework with a common vocabulary" (Klein cited in Holbrook, 2013, p. 1870). Budd and Dumas (2014, p. 284) address this heterogeneity of language and present semiotic and communicative modelling as means for scholars to clarify disciplinary positions and "possibilities for forging integrated interdisciplinary work". Klenk and Meehan (2015), on the other hand, argue that "the integration imperative" risks concealing conflict and power in knowledge production and Holbrook (2013, p. 1876) illustratively describes interdisciplinary research as a high-stake negotiation of (sometimes) incommensurable worldviews. Madsen (2018)

defines the latter view as a discourse that articulates interdisciplinary research as a mode of knowledge production nourished by discipline-inclusive interactions among scholars, as opposed to *integration* that negates disciplinary knowledge.

In our study, the rhetorical situation, i.e. “the interaction between the elements writer, purpose, audience, subject and context” (Andersen, 2006, p. 217-218), of doctoral writing grows complex. Our informants have a variety of disciplinary/educational backgrounds, and they also interact with fellow students, supervisors and other seniors who often differ from them in disciplinary and professional backgrounds. In writing for publication they draw on different disciplines and enter into an extended multi-disciplinary network of actors and technologies including supervisors, reviewers, editors, and other commentators, as well as librarians, databases and indexes. Interdisciplinarity is not articulated *a priori* in these networks, and we cannot assume that PhD students are socialized through interaction with people mastering stabilized, integrated frameworks since such frameworks may not exist. We acknowledge challenges posed by differences of vocabularies and semantics in interdisciplinary epistemic multiplicity (Budd and Dumas, 2014), but dismiss the premise of integration (Madsen, 2018).

In information studies, interdisciplinary scholarly communication is mostly studied at macro-level (Palmer and Fenlon, 2017). Whereas bibliometric studies on citations in publications across disciplinary boundaries help to document whether interdisciplinary processes have taken place, they cannot explain or describe them (Madsen, 2016, p. 2698). To remedy such analytical one-sidedness, Palmer (2010) proposed research on information practices as an important complement to bibliometric research. However, studies on information practices are often “‘domain analytic’ in nature, taking a targeted approach to a sub discipline or some other formalized research community” (Palmer, 2010, p. 181). A recent literature review of citation behaviour research by Tahamtan and Bornmann (2018) indicates a similar approach. Few studies address citations as part of writing processes in *interdisciplinary* settings. We aim to answer Palmer’s call, and address citations as part of interdisciplinary academic writing. We do so from a perspective informed by a moderate constructivist version of practice theories (Halkier and Jensen 2011; cf. Schreiber 2014).

In this paper, we scrutinize aspects of the development of scholarly subjectivity in an emerging interdisciplinary field, i.e. how students arrive at scholarly agency in the context of citing to strengthen arguments through three interrelated research questions:

- 1) How do interdisciplinary PhD students understand the activity of providing citations within the rhetorical situation of argumentation?
- 2) How do PhD students who cite literature from different scholarly fields identify with various scholarly and professional subject positions?
- 3) How are these understandings and identifications aligned when the students negotiate their writings with journals?

In what follows, we commence with a brief review of literature on citation behaviour. We ask how current knowledge and frameworks can inform our discussion. In particular, we explore implications of citing for the negotiation of scholarly subjectivities. We view citing through a practice theory lens that merges normative and social constructivist frameworks. We then explicate the notion of subjectivity before presenting our methodological approach and empirical material. Finally, we present our analysis and a concluding discussion.

## Citation behaviour

In the present paper, we use “citation” synonymously with in-text bibliographic references. By “citing”, we mean placing bibliographic references in articles. Citations have been construed as disseminated information that takes on cultural significance in the citation process (cf. Small, 1978). Several studies lean on such notions of citation, relating citation behaviour to identity-building (Ryan et al., 2017) and to positioning (Thornley et al., 2015), indicating that citations make different subjectivities available in scholarly communication. Two broader theoretical frames have dominated explanations of citation behaviour, namely normative and social constructivist approaches (Cronin, 1984; Thornley et al., 2015, Nicolaisen, 2007; Tahamtan and Bornman, 2018, p. 5). These two approaches contextualize differently writers’ reasons and decisions about whom and what to cite (Small, 2016; Nicolaisen, 2007). They provide different suggestions of how researchers become positioned as subjects in the citation process.

*Normative theories* hold that citing is normative behaviour (cf. Kaplan, 1965; Merton, 1973). Citing authors complies with “methodological canons” (Zuckerman in Small, 2016, p. 57). Norms prescribe acceptable forms of coherence between the building blocks of research in a given historical and disciplinary situation. Citation is the communicated token for the citing author aligning with ideals of consilience, i.e. fitting together facts and theories, findings and methods, prior knowledge and novel adjustments. Methodological canons are assumed to ensure sound, transparent and valid argumentation. Author-centred studies within this perspective stress the importance of the cognitive content of cited work (Nicolaisen, 2007; Erikson and Erlandson, 2014), and it is expected that “[...] papers do properly cite the earlier literature” (Garfield 1980, p. 217), i.e. that the most relevant literature available is used to substantiate claims (cf. Baldi, 1998). Norms, however, do not appear from nowhere (Small, 2016, p. 57.) Several studies on disciplinary variations in how and what researchers cite demonstrate the existence of field-specific norms (e.g. Harzing and Alakangas, 2016; Hellqvist, 2010). By adopting the citing behaviour of their epistemic communities, authors form distinct identities (Erikson and Erlandson, 2014, p. 625). Normative explanations of citation behaviour point towards researchers’ subjectivity as a product of field-specific socialization.

*Social constructivists of science* [1] challenge explanations rooted in the assumption that researchers cite according to idealized scholarly norms and contest the view of citation as presented above. Pera (1994, 2000) pointed out that an argument may be convincing although it disregards the rules, and introduced “the third player” to the analysis of scholarly argumentation. “Truths” about a phenomenon are never revealed by a transaction between a first player (the researcher) and a second player (the phenomenon studied). Instead, they are decided in the discursive practices of the scholarly community. The community is the third player that the citing authors must convince, and at stake are the specific beliefs shared among members of specific communities (Pera, 2000, p. 60). Pera and fellow social constructivists view science as an art of persuasion. Citations become rhetorical devices (Nicolaisen, 2007; Small, 2016), as they “provide justification for arguments and demonstrate novelty of one’s position (Gilbert, 1977; Dubois, 1988)” (Hyland, 2004, p. 20). Argumentation consists of moves scholars make to make their audience believe that truth is established. Citations are means by which scholars bring in allies and send out threat signals (Latour and Woolgar, 1986; Nicolaisen, 2007). This view on citation explains subjectivity in scholarly communication as individuals’ capabilities to position themselves.

## Citing as social practice

Our study is informed by a moderate constructivist interpretation of practice theories (Halkier and Jensen, 2011; cf. Schreiber 2014) by which the above frameworks merge in our understanding of the implications of citing for the formation of scholarly subjectivities. Thus, we recognize an interest in combining the explanatory power of the normative and social constructivist frameworks to explain citation behaviour (cf. Thornley et al., 2015; Nicolaisen, 2007; Small, 2016).

In our framework, citing, like any social practice, is configured as an organized entity of activities. Citing practices constitute a nexus in which sayings (e.g. expressing a viewpoint by citations) and doings (e.g. picking out citations for use) are linked in certain ways (Schatzki, 2002). The normative organization of practices is included in the analysis of this linkage. Activities, in our case exemplified by students' evaluation and application of citations, "become coordinated by understandings, procedures and engagements" (Warde cited in Halkier and Jensen, 2011, p. 104), i.e. by interpretations of how to do, principles for what to do, and "emotional and normative orientations related to what and how to do" (Halkier and Jensen, 2011, p. 104). This nexus also requires performance for its existence (Schatzki, 2002). In our analysis, we foreground the students' understandings and engagements as related to how they discursively enact citation and argumentation within and across various disciplines.

This framework avoids describing citing authors as purely rational and strategic actors, without falling into methodological collectivism. A constructivist reading of practice theories stresses *negotiation* as a productive part in the enactment of practices (Schreiber, 2014; Halkier and Jensen, 2011). In the performance of a practice, "there is negotiation of the 'right' way to perform the practice" (Schreiber, 2014, p. 350). We see these negotiations as partly pre-reflexive in that they occur by routinized understandings acquired by engagements with scholarly communication in various fields. We also see them as partly reflexive in that they occur when "understandings, procedures and engagements in practices and performances are explicit and reflected upon through discursive consciousness" (Halkier cited in Schreiber, 2014, p. 350). In our analysis, we foreground negotiations in the students' talk when they account for what matters to them when citing.

Social categories, counting in subject positions in citing, are enacted and negotiated within and across practices. This shifts our focus from closed communities to intersecting practices across disciplines (Gullbekk, 2016). The interdisciplinary discourses researchers jointly produce, thereby jeopardizing familiar disciplinary subject positions (Holbrook, 2013), can be viewed as both products of and producers of "links between previously unconnected practices" (Schatzki cited in Gullbekk, 2016, p. 727). In the following section, we further prepare the ground for an analysis of this dynamics in citation by explicating the concept of *subjectivity*.

## Subjectivity and agency

*Subjectivity* is closely related to, but not identical with, *identity*. Whereas identity may be described as the changeable *product* of ascriptions deriving both from individuals' identifications of themselves and from others' identifications of them (Jenkins, 2000), subjectivity is "bound up with ideas of the self as an acting agent" (Boon, 2007, p. 1). Our study involves questions about how students engage with positions stemming from different disciplinary contexts, and about the ways in which these identifications and positions are constitutive for their agency in interdisciplinary scholarly communication. We do not address identity processes per se; rather we scrutinize formations of scholarly subjectivities as related to citing.

We understand subjectivity as an important part of identity construction in that it denotes active biographical work on the self (Farrugia, 2013, p. 284). More importantly in our study, we see subjectivity as a basis for action that draws on identities historically constructed and re-constructed in various contexts (Farrugia, 2013, p. 284). Thus, we reconcile two opposing views; on the one hand, subjectivity as determined by discourses and their governance (cf. Ortner in Rouse, 2007, p. 506) and on the other hand, subjectivity as autonomous acting based in individual selves (cf. Boon, 2007). Firstly, we acknowledge the discursive constitution of subjectivity, i.e. that in order to understand subjectivity, we must apprehend *subjection* (Foucault, 1982). Subjectivity is formed in relation to power, which is more than an external force we can choose to oppose or subject ourselves to. Becoming a subject is *coming into agency* since subjection is the “[...] fundamental dependency on a discourse we never chose but that, paradoxically, initiates and sustains our agency” (Butler cited in Petersen 2007, p. 477). Secondly, however, we lean on Taylor (2004, 1985) in keeping a space for reflexive subjectivity. To Taylor (2004, p. 27), our identities are “defined by the commitments and identifications which provide the frame or horizon within which I can try to determine from case to case what is good, or valuable, or what ought to be done, or what I endorse or oppose”. Consequently, subjectivity emerges within a moral context where we grapple with the worth of feelings, actions and desires (Taylor, 2004, p. 52). We come to agency by what coheres as meaningful to us. At the same time, Taylor maintains that language, by which we express and interpret the good, places subjectivity within the ontologies of social practices. “The vocabulary of a given social dimension,” Taylor states, “is grounded in the shape of social practices in this dimension” (Taylor, 1985, p 33-34).

These understandings of the formation and sources of subjectivity do not avoid two interrelated problems that occur in interdisciplinary settings. The students we interviewed find themselves subjected to more than one scholarly discourse; they learn scholarly argumentation through multiple discursive sites. Moreover, we anticipate that the students need to resolve contradictions and conflicts of intersecting scholarly fields and multiple interpretations of what is valuable or good (cf. Taylor, 2004), when engaging in citing in interdisciplinary settings. In this regard, we find work done on *positioning* and *identification* to be useful amendments to our analytical framework.

To us, a subject position reflects a progressive duality in social structure (cf. Giddens, 1991). In discursive terms, it is a medium of practices in that it “incorporates both a conceptual repertoire and a location for persons within the structure of rights for those that use the repertoire” (Davies and Harré, 1990, p. 46). Simultaneously, it is also a changeable outcome of the same practices. We all bring uniqueness to particular positions in particular settings. We bring experiences of being, or having been, positioned in other discourses across time and space (Davies and Harré, 1990). Thus, positions are realities socially constructed and negotiated in particular contexts. As argued by Dagg and Haugaard (2016), what constitutes subject positions as meaningful is a “ring of reference” (Barnes, 1988) of social actors. In our case these social actors are the various supervisors, editors, reviewers or other relevant others who decide whether the writer can pass as scholarly appropriate to the particular situation. Within a “ring of reference” subject positions become “the objects they are because of the context of action and belief that rings them about” (Barnes, 1988, p. 49). In our informants accounts subject positions are “ringed about” by the actions and beliefs associated with relevant others, i.e. their audiences, in Pera’s term both past and present third players.

In interdisciplinary writing, subject positions vary “because there are many and contradictory discursive practices that each person could engage in” (Davies and Harré, 1990, p. 46). We expect researchers to



engage with various subject positions by different commitments and identifications (cf. Taylor, 2004). We will explore this in terms of different *modes of identification* (Wenger-Trayner and Wenger-Trayner, 2015). In the view of Wenger (2010, p. 3) and Wenger-Trayner and Wenger-Trayner (2015), learning is “a process of realignment between socially defined competence and personal experience”. In landscapes consisting of different practices, such as interdisciplinary settings, participants’ identifications modulate differently with the communities of practice that populate the landscape. Participants can be involved by immediate *engagement* with practices, by *imagination* across boundaries, and by *alignment* of different practices (Wenger-Trayner and Wenger-Trayner, 2015). According to Wenger-Trayner and Wenger-Trayner (2015, p. 24), these modes of identification imply different forms of accountability to the regimes of competence involved. We believe that interdisciplinary knowledgeability rests in the translation of complex experiences, or combinations of different modes of identification, across a landscape of intersecting practices. In our analysis, the different modes of identification are read as negotiated outcomes of encounters with available subject positions and the different third players and discourses that ring these positions about (cf. Pera, 2000; Barnes, 1988).

### Research context and methods

We analyse 22 semi-structured interviews conducted with nine PhD students. We focus on the organizing phenomena by which citing configure as practices (cf. Schatzki, 2002). Our aim is to prompt discursive work, i.e. interview talk that provides us with “(partial) access to the normative and moral texture of the local practice” (Nicolini, 2009, p. 204). In describing or commenting on their writing, our informants convey what is important to them and make connections to the “moral textures” of past and present citing. Furthermore, we explore our informants’ understandings and the subject positions that emerge in their accounts of citing.

An academic department, subsequently referred to as “the Department”, located at a Scandinavian tertiary institution, runs an interdisciplinary PhD programme. Research in the Department relates to a variety of scholarly fields and is coordinated through research groups. Moreover, and perhaps most significantly, these groups lack dedicated publishing fora where their interdisciplinary work has an established ring of reference. The programme draws on a broad range of disciplines within education, the humanities, social sciences and health sciences. The programme also relates to a particular set of professions.

When we approached the programme in April 2015, thirty-three PhD students were enrolled. Some two-thirds of these were writing article-based dissertations and thus became the target group of this study. We recruited nine students. Their academic profiles varied in terms of educational and professional backgrounds and research topics. For the purpose of anonymization, we do not name any research fields, disciplines or professions except when giving general examples. Instead, we refer to X-, Y-, and Z-disciplines or professions, which together form strands of the emerging interdisciplinarity (I-discipline) as the core of the PhD programme. X signifies disciplines or professions that our informants have previously engaged with in studies or work. Y signifies disciplines, professions or distinct subject areas that they familiarize themselves with and draw upon in their PhD research. Z signifies disciplines, professions or distinct subject areas relevant to the programme but from which our informants distance themselves. We name neither the phenomena nor the entities our informants are studying. Instead, we simply refer to [phenomenon], [concept] or [process].

The interviews took place between September 2015 and June 2017. Three semi-structured interviews were planned for each informant. The first interview took place when the informant was drafting an article. The second interview was scheduled shortly before submission to a journal. The third interview took place when the informant had received a peer review. Five interview series followed this procedure. For practical reasons, the final two interviews were combined in two cases, and with one informant, all three interviews were combined into one. One informant had not yet had his article reviewed by the end of the interview period. In all, we conducted approximately 40 hours of interviewing. Interviews lasted 90-120 minutes.

Pseudonym	X-discipline	Number of interviews
Mary	Degree in profession 1 taught in the Department	3 interviews
Lynn	Degree in profession 1 taught in the Department	3 interviews
Alex	Degree from elsewhere	2 interviews
Tom	Degree from elsewhere	2 interviews
Brit	Degree in profession 2 taught in the Department	3 interviews
George	Degree from elsewhere	3 interviews
Justin	Degree in profession 2 taught in the Department	1 interview
Andrew	Degree from elsewhere	2 interviews (review not received)
Mina	Degree from elsewhere	3 interviews

*Table 1: overview of the informants*

All interviews were conversations about the PhD students' writing. The first interview enabled the students to describe their research and included contextualizing topics such as the disciplines of their educational and/or professional background, disciplines and fields of relevance to their writing, prior experience of scholarly communication, interactions with supervisors, reasons for choosing to write an article-based dissertation, information searching and feedback from seniors and peers. The second interview consisted of two sections. First, a walk-through of the references included in their manuscript during which we discussed reasons for each reference. Second, in a talk-aloud search session, we asked the informants to explain the steps they took when looking for literature. They were free to start looking wherever they chose. Some started in Google Scholar or in discovery tools provided by the library, others consulted conference notebooks or folders on their PCs containing selected articles; still others started in reference lists of books, articles or course syllabuses. In all instances, the initial choice generated further searching. The walks through the reference lists and the talks through information searching elicited conversations about the importance or non-importance of particular authors, works and fields. The third interview focused on the reviews they received from journals and included questions on how reviewers' comments should be responded to, on advice taken from supervisors, other senior colleagues or fellow students and on potential changes in the reference list of their articles.

We followed each student except one over 6-18 months. This enabled an ongoing rich conversation about their work in progress. The longitudinal design aimed to strengthen the validity of the analysis. Firstly, we could check the consistency of understandings across time. Secondly, we had the opportunity to check and refine emerging categories with the informants. The first author conducted all interviews face-to-face with the students in their office spaces.

In the analysis of the transcribed interviews, we applied a stepwise deductive-inductive approach (Tjora, 2018). An initial reading of the transcripts identified topics across the material. These were coded by



using HyperRESEARCH software. Codes were labelled with categories close to the informants' own verbalizations such as "making myself less interdisciplinary", "originally I am an X-disciplinarian" or "my research belongs to social sciences". We ended up with 600 codes. We then let the research questions guide our "category zooming" (Halkier and Jensen, 2011) to identify broader themes across the initial codes. These included themes such as "important audiences" and "work worth citing". This phase entailed a dialogue between the empirically grounded themes and our theoretical framework, where we first re-contextualized the broader topics in relevant parts of the transcripts, and then constructed aggregations. These are presented in the following sections as "understandings of information linking activities" and "modes of identifications". In summary, the analysis builds on a holistic approach to the material, focusing on informants' understandings and engagements. Nevertheless, in a validity check based on extracts from the interviews, the authors provided 19 of 20 extracts, completely (11) or partly (8) with the same codes independent of each other.

We start our analysis of the emerging practice of interdisciplinary argumentation by exploring the students' understandings of the rhetorical situation of scholarly argumentation and the activities of linking information in argumentation, i.e. citing. Next, we examine the subject positions associated with linked information and the different modes through which the informants identify with these positions. Finally, we explore subject positions as negotiated with targeted journals.

### The rhetorical situation of argumentation

The informants share a twofold understanding of the rhetorical situation of scholarly argumentation. We label the first of them "bringing in something new". This concept concerns what students perceive as a requirement either to introduce something new, i.e. elements not yet shared by interlocutors in the rhetorical situation, or to reconnect elements in a way that will change the beliefs of the interlocutors. Lynn points to a basic rule of research, namely the commitment to question established truths and to offer alternative explanations. She explains how a certain model figures as given in her field of research, and states, "I think we should question such beliefs, and see whether they will survive or fall". She continues by explaining how she brings in something new to the communication:

This is what I'll do in my second paper. Challenge the [particular debate] and scrutinize [an example of a particular model in use]. Then I'll introduce a new theory, well, not exactly a new theory, but instead of [concept 1] I'll introduce [concept 2]. (Lynn)

The idea that argumentation should provide changes in perspective may imply different moves. Alex describes one alternative. He claims that in a particular field, research has been monopolized by keeping [Y-concept] at the centre. In order to "bring in something new" he combines explanations found within different contributions:

[Y-discipline] has a very individualized perspective, but at the same time, it includes more explanatory factors. So you sort of connect them, connect [names of four different disciplines]. [...] You capture the phenomenon more precisely. (Alex)

The second understanding concerns "establishing common ground" in order to ensure a space for communication. Tom, for instance, interprets one of the rejections he received by a journal editor as caused by the lack of shared frames of reference. He has stepped "outside the box":

I've rarely received negative feedback on my analyses; they're generally good. But it's kind of the way I "frame" them. My interpretation of this is that I'm stepping a bit "outside the box", and this makes it harder for the journal to take a chance on me. (Tom)

Mary tells how pleased she was when she finally found literature that would anchor her argumentation in principles presumably shared with her audience:

That particular literature search turned out to help me to justify writing about this within [X-scholarly field], and even more specifically the kind of concepts you use about [researched group's] experience in relation to [the particular phenomenon] I'm studying. [...] It resonates with basic principles of the [particular profession-based field of research]. (Mary)

The two understandings of "bringing in something new" and "establishing common ground" contain what we would call a rhetorical paradox of argumentation in the informants' talk about their writing: Scholarly argumentation, a practice aimed at changing beliefs, depends on bringing in something new to the interaction (e.g. data, methodology, theory and/or concepts that stand out as unfamiliar to an audience). However, too much novelty comes at the expense of the common ground for communication.

The students must balance this paradox throughout their work on manuscripts. Justin illustrates how "bringing in something new" may threaten the necessary "common ground for communication". In his latest article, he introduces concepts from a particular author and applies them to his material. However, when asked why he elaborates little on [particular author] in his actual manuscript, he answers: "It's because I write for an audience of [Y-professional] scholars. So it's about not moving too far into what they may object to".

This paradox represents more than a technical writing issue. What is at stake is the establishment of the students' scholarly subjectivities. The remainder of the analysis will focus, firstly, on how the paradox plays out through the informants' understandings of the activities of *linking information in arguments*, i.e. citing. Secondly, it will scrutinize the subjectivities inherent in ways they express accountability to and identifications with different regimes of belief, competence and knowledge.

### Linking information in arguments

Based on the material we describe two main *interrelated* understandings of *the activity of linking information* in argumentation. These understandings resonate with the paradox. The first is "pushing the boundaries of argumentation", which emerges in three versions: "claiming weaknesses", "contesting assumptions" and "demonstrating the strength of others". The second understanding is "keeping the argument within boundaries". We can likewise identify three alternative versions: "bringing in broad gauge classics", "translating by kings and queens" and "measuring the dose". The two main understandings are not to be read as two separate ways of conceiving the activities of linking information. Rather, they are intrinsically related.

#### *Pushing the boundaries of argumentation*

Informants describe their research as situated at the intersection of different disciplinary and professional fields. They describe the subsequent challenge as falling "between all stools" (Tom) or finding it difficult to "frame in our research project" (George). Some may apply literary methodology in assembling an argument that can work in communication with audiences outside communities of literary scholars. Others may put hermeneutics, narrative analysis, statistical modelling or empirical

evidence to work in fields in which they have no significant tradition. Subsequently, they ground their argument in literature potentially unfamiliar to their intended audiences. The two main understandings of linking information in argumentation, i.e. “pushing the boundaries of argumentation” and “keeping the argument within boundaries” are thus understandings of how to move information across borders.

The first version of how the informants understand information-linking activity as “pushing boundaries of argumentation” is termed “claiming weaknesses”. The informants are looking for fallacies, omissions or insufficiencies open to criticism. Tom is applying a specific method from [Y-discipline] in a field that he describes as dominated by [X-disciplinarians]. He explains how the established results within the broader [name of field] are caused by the use of outdated techniques. He needs to cite literature to demonstrate this:

Then you can show that there’s some sort of discrepancy between the findings in [Y-discipline], and the findings in [X-discipline]. [...] I find it rather neat really, because showing a discrepancy between results justifies why your study is needed. (Tom)

In the second version, “contesting assumptions”, the informants stress the importance of looking for discrepancies in explanations, methodological perspectives or particular scholarly discourses between the established literature and the design of their own research. Lynn is referring to literature whose terminology expresses the phenomenon she is studying in individualistic terms, as opposed to her efforts to situate the phenomenon in more collective terms.

I often use work by [particular author] if I want criticize what’s written. I find her very uncritical of her own writing about [particular phenomenon]. It’s very individual-oriented. (Lynn)

We label the third version “demonstrating the strength of others”. Some informants put effort into identifying sources that can demonstrate *why* findings or theories in one particular field of research provide valuable insights in another. Others point to the importance of making explicit what a specific methodological approach to the phenomena studied can enable them to achieve. Justin, for instance, uses [specific methodology] in a field where it rarely figures as part of the scholarly discourse. He explains: “In my third article, where I apply [name of scholar], I have to argue why I’m using him. What can [this approach] achieve that other methods cannot.” (Justin)

### *Keeping the argument within boundaries*

Throughout the interviews, the informants refer to multiple audiences for their articles across scholarly and professional communities. The three versions of “keeping the argument within boundaries” are understandings aimed at accommodating multiple audiences.

The first version is “bringing in broad gauge classics”. Several of the informants mention applying perspectives that presumably lack a history of application in the field of their intended audiences. One solution is to bring in scholars widely recognized across disciplines due to their status as “broad gauge scholars” (cf. Whintrop in Klein, 1990, p. 186). Examples of such literature in use among the informants could be discourse analysis by Foucault, Bourdieu’s theory of practice, or semiotic work by Lackoff and Johnson. Lynn explains why a specific reference is in her manuscript: “I was recommended to read [these particular broad gauge scholars] to gain support for the theory” (Lynn). As a master’s student in her X-discipline, Ann applied a particular version of an analytical framework. Her plan is to apply the same analytical tools in her current writing, but “obviously, there’s no tradition here of applying it at all,

so maybe it's stupid of me to look at it. Anyway, I'll use [name of a broad gauge classic], as he holds a strong position here". (Ann)

The second version is "translating by kings and queens". Informants describe literature in terms of power. An author may be identified as "a queen within the field" (Lynn). An ideal way of embedding a perspective, theory or concept is to find a citable work by an acknowledged author in the field of the intended audience:

That's why I've included her. She too talks about [concept] and about [phenomenon]. That fits right in. [...] she writes a lot about [X-profession]. So she may well be a professor in that field. That's kind of important to me. (Brit)

The third version is "measuring the dose". Lynn makes sure that the field of her perceived audience is well represented in her text: "I'm very concerned that my reference list might be dominated by literature in [X-profession]". Another way of measuring the dose is to weigh references made to literature lacking a history in the audience's field against the number of references to articles in the targeted journal. Because "Then they know. Not that I should be strategic about it, but I have noticed that they like it when you cite articles that were published there before you." (Alex)

## Subject positions

When asked about their PhD-projects, the informants gave intricate accounts of their trajectories up to their current phase. Their talk draws upon multiple subject positions. Brit's account is typical:

I got a degree in [X-profession] here. Then I worked as an [X-professional]. Then I wanted to take a master's degree. The natural thing to do would have been to get the master's in [X-profession] too, but I didn't want that. I was more eager to do [Y-discipline], although it would imply a longer journey. But I really wanted to do [Y-discipline]. That's what I did and I wrote about [X-profession], so I stayed within [X-profession]. After that, I worked as a research assistant at [name of research centre]. I also spent six years working in a [public agency] where I worked with [X-professional field]. I'd decided not to do a PhD; otherwise, I'd have done it long ago. But when I'd finished my master's, there was this PhD programme that I felt was kind of my programme. (Brit)

In her account, Brit seeks to establish the position of doing a PhD at the Department that she associates with the professional field in which she originally graduated. This position seems important to her, as it relates to '*kind of her programme*'. In her effort, however, she is negotiating past positions, such as acting as a *professional practitioner* and doing *scholarly writing* on phenomena within the professional field. Even when she chose to start studying another discipline, she states that she "*stayed within*" her professional field by making it the object of her research.

This example illustrates modes of identification with different subject positions: being a *native* (Brit is a trained and experienced practitioner of a particular profession), being a *visitor* (Brit spent time doing a master's degree in a different discipline) and a *citizen* (Brit is enrolled in a PhD programme) in a field. In the following analysis, we examine these modes of identification.

### *The native mode of identification*

A dominant subject position in Brit's account is in a trajectory within a particular professional field. She shares this strong situatedness in a past professional field or discipline with other students and seniors

in the Department. An expression regularly used to describe either oneself or another researcher was that of origin: “*where I originate from*”. Lynn opens her scholarly self-definition as follows: “We have this funny expression of “originally I’m a...” or “My original degree is in [name of profession]”. Such expressions indicate that Lynn’s self-definition draws on professional experiences of significance. In parallel, those who do *not* relate strongly to a profession draw on a disciplinary trajectory. George explains:

[The Department] is a very interesting environment when you come from a different discipline. People would probably label me as a [Y-disciplinarian]. I don't think I'm a [Y-disciplinarian], just because I'm doing [Y-research]. I still regard myself as an [X-disciplinarian] who is trying to defend [particular understanding of the phenomenon] from a broader perspective. Most of my knowledge comes from [X-discipline]. (George)

The profoundness of the identification with a particular profession or a discipline is indicated by the way this subject position is reinforced in the informants’ talk about references and literature. Mary expresses it most forcefully when she comments on the books on her bookshelves. These are original works by researchers that have had an impact across different professions and disciplines, such as Foucault, Bourdieu or Arendt. Mary, however, explains how they influence her entire worldview as an X-professional.

I’ve given it a lot of thought. My entire worldview, both as a professional and as a person, is shaped by what I learned in [name of educational programme]. [...] I really got a grasp of [basic principle of her professional field as reflected in the literature]. (Mary)

George uses literature that enables him to relate critically as an [X-disciplinarian] to the phenomenon he is studying. He was motivated to attend a conference abroad on his research topic because he knew one of the keynote speakers from his master’s in [X-discipline]. He was not disappointed:

She was very good. I’ve known [keynote speaker] since way before I was even interested in [particular phenomenon]. She’s a feminist [X-disciplinarian]. I read lots of things by her. So it's a very good reference for studying critical perspectives. [...] Feminists are good at digging into different perspectives. Using [the perspective], I can somehow relate to [phenomenon].

Identification in a native mode is linked with both an *immediate* and a *biographical engagement* and situatedness. From the actor’s point of view, engagement takes place within a ring of reference where subjectivities are defined, controlled and enabled by ways of doing and understandings that the actor experiences as shared over time with relevant others.

#### *The visitor mode of identification*

In their research, the informants enter multiple disciplines and research fields. Tom describes his project as a “three-headed monster”, meaning “you might say there are three different research traditions that overlap”. The visitor mode operates in two intersecting layers in the students’ argumentation. Firstly, as we saw in Lynn’s illustrative use of an individual-oriented Y-disciplinarian, it often involves criticism or modifications of the ways Y-researchers address the phenomena of interest. Secondly, the informants may draw on insights from Y-research when they criticize understandings related to their X-disciplines. Tom points out: “If you have the proper writing ability, and if you can learn from the way [Y-disciplinarians] think, there are many things one can reformulate in [X-discipline].”

To the participants, acts of criticism and modification involve a sense of accountability to the field they have entered. George is writing an article in which he argues for a re-conceptualization of a particular phenomenon in both X- and Y-disciplines. He has invested considerable time and effort in Y-disciplinary literature. He is impressed: "I think it's really neat, I like it. I'd like to be a [Y disciplinarian]. But unfortunately I'm not a [Y-disciplinarian]. I think it's a very fair interdisciplinary science and they know their limits. They're very aware of their assumptions." George's supervisor is not familiar with Y-disciplinary work, and thus George seeks feedback from people who are. One response he receives from Y-disciplinary scholars is that when he uses a specific classical quotation, he refers to a different edition than that commonly used by [Y-disciplinary] scholars. He takes notice and concludes, "So I feel confident that I got my [Y-discipline] right".

Mary expresses a similar concern about not getting her [Y-discipline] right: "I'm always afraid when using references that, like, people in the know might say "Hey! This is a crappy theoretician"". Other informants express comparable accountability to fields that they use in their writing. In his article, Justin deconstructs a concept that is a keystone in the Y-field of his research:

It discusses [specific concept] because it's a key point in [name of his main theoretical perspective]. Consequently, I need to increase my knowledge of [the concept as used and understood by Y-profession].

Identification in the visitor mode is characterized by interested *imagination*. Intentional or circumstantial encounters with various ways of enacting research enable the students to see their work from different perspectives and to explore possibilities. Imagination becomes an asset both for adjusting subject positions available in a native mode and for establishing subject positions encircled by Y-disciplinary or Y-professional work.

#### *The citizen mode of identification*

Identifications with subject positions in native and visitor modes do not necessarily imply accountability towards the emerging I-discipline of the PhD programme. Nevertheless, subject positions are ringed about by relevant others in the PhD programme. Through the interviews we get a grasp of this through the students' accounts of both doing a PhD in the Department and "doing supervisee" (cf. Petersen, 2007), i.e. how they align themselves with supervisors' viewpoints.

Brit understands the PhD programme as anchored in her x-professional field. However, she points out a difficulty in aligning with this audience when writing for publication. Brit explains: "the [X-professional field] is a very narrow field. So I imagine something broader". She continues:

I do hope it will reach [X-professionals]. I do write for [X-professionals], but I think, regarding topics, I write about things of interest to others, to those doing [Y-discipline]. I dwell on social science topics in a broader sense. (Brit)

In seeking to align herself with her PhD programme, Brit finds it important to state that she does "write for x-professionals". However, her identifications with the Y-discipline seem to represent a challenge in her alignment. She negotiates the conflict by conciliating the X-discipline and the Y-discipline as "social science in a broader sense".

Brit shares this challenge with other students who "originate" from one of the professional fields:



We need to strengthen our scholarly identity to become confident about competencies particular to our professions, despite being an interdisciplinary group. This is discussed in the PhD programme. That we need to position ourselves. During a seminar for instance, I was told to position myself in the field of [research on particular phenomenon]. Who am I talking to here? I have to make that explicit because I'm doing my PhD here. (Mary)

A sense of accountability towards the PhD programme is also included in the reflections of those not originating from a profession represented in the Department. Andrew, for instance, identifies his X-discipline as his audience but realizes that this might run counter to what is expected:

I do think it is [X-discipline]. Still, I'm not supposed to think so. I don't quite know what kind of discipline [the PhD programme] represents. This implies that I have to write for an audience I don't know very well. My background is from elsewhere. (Andrew)

Doing a PhD in the Department also includes "doing supervisee". Informants frequently refer to their supervisors' viewpoints. Mary, with a background in X-profession, describes her supervisor as a Z-disciplinarian. To Mary, it is important to take advice from her supervisor, whom she sees as a key supportive senior and an expert in the analytical framework that she is using:

"She's a [Z-disciplinarian] [...] She's always supported me along the way, helping me out with drafts and such. She has the scholarly perspectives that I need and want. And the analytical competence I want for my project. In a way, she's the main character." (Mary)

Simultaneously, Mary is distancing herself from the Z-discipline:

The one thing I think could cause a conflict as regards the [Z-disciplinary] field [...] is that they're very focused on [particular dimension]. So is my supervisor. [...] I don't find it that interesting in relation to my project.

Instead, Mary states that she relates to her supervisor's analytical perspective "like it's applied in social studies, and a bit like in [Z-discipline]". These negotiations of perspectives are not trivial. They challenge "the doing supervisee".

A citizen mode of identification is entangled in *alignment*. In the students' accounts above, "doing supervisee", for instance, emerges as a joint accomplishment that aligns the identification with subject positions in a native and a visitor mode as *doing social studies*.

### **Publishing: Negotiating subject positions**

In the immediate setting of their research, the students' identifications in a citizen mode imply accountabilities towards the emerging I-discipline of the Department and towards "doing supervisee". The identifications they bring with them in a native and a visitor mode are aligned by subject positions ringed about in the interaction with supervisors and other students and seniors in the Department. Interactions with journals challenge these alignments of identification on two interrelated levels. On the level of individual students submitting for publication, their accountability is assessed beyond the immediate community of peers in the Department. The alignment of identification in a citizen mode is re-negotiated to fit what could be called the "cosmopolitan mode" of international scholarly publication. Based on the interviews, we describe three different re-alignments of identifications. Moreover,

different combinations of the three re-alignments are possible. On the level of the citation practice, the alignments must be managed by the understandings of linking information in the argument.

The first re-negotiation can be called *staying native*. It is directed toward a citizenship that encloses subjectivities accommodating the informants' identifications in a native mode. This re-negotiation emerges in two interrelated versions, namely as *strengthening x-disciplinary positions* and as *opposing positions in visited fields*.

Some students publish in journals that keep them close to their X-disciplines or X-professions. Mary states that "I'm going to position myself in the X-professional field. I will publish in X-professional journals." Publishing seems to strengthen Mary's sense of nativeness, but not without effort. In her writing, Mary draws upon literature in both a native and a visitor mode. However, a key feature of the phenomenon she is studying is conceptualized differently across the disciplines she draws upon, which was an issue in the review process:

I'm quite sure the [first] reviewer is a Z-disciplinarian focusing on [a particular theory about the phenomenon]. The funny thing is that my supervisor is also a Z-disciplinarian. She's as allergic to [the particular theory] as me. However, it's not my field. It's not what I'm doing. [...] Then the second reviewer, who expresses "serious doubts", I think provides very relevant and good comments. Because precisely that passage about [the particular concept], it really struck me. Actually, I'm grateful. It makes sure I place my research within the field where it belongs. That way, it doesn't get misplaced. (Mary)

Mary ignores the first reviewer, who supposedly speaks from Z-discipline. She justifies this by referring to her supervisor who shares Z-discipline with the reviewer. The second reviewer, however, pinpoints her unease with different understandings of the phenomenon. With the help of this reviewer, Mary identifies and cites a particular X-professional author. In "translating by this queen", her subjective position as an X-professional is "ringed about".

Lynn has previously published an article co-authored with her supervisor in a Scandinavian journal. She submitted her second article to an American journal of X-professionalism. This posed a challenge to the perspective she brought from her earlier publication. The reviews of her article indicated that the "kings and queens" varied from what she was used to.

When I go Scandinavian I can fully make use of [name of the authors of particular studies], but that's not very interesting to the journals in the States. [...]. I was criticized for not being international enough. They missed some of "the big ones" [...], the ones who are recognized in the US, and here. They're to some extent the same people. But I didn't cite them enough. And I totally agree. (Lynn)

Lynn re-wrote her article and submitted it to a European journal. Keeping her theoretical grounding (a perspective not traditionally applied in her profession), she waited anxiously for the review. "Because this one I wrote alone [...]. It wasn't easy really, and my supervisors disagreed with each other about what to do with it. I had to stand up for what I thought was right. It became important to me to prove that my choices would work" (Lynn).

Both Mary and Lynn kept their native mode of identification throughout the negotiations of citations. They translated by kings and queens and they measured the dose of controversial citations. At the same

time, they modified their visit to Y-disciplines by accounting for profession-based comments as expressing a broader social scientific subjectivity. By doing so, they reconnected with the PhD programme and the doing of the supervisee. In the interview, Lynn shifts from “I” to “we” when she explains that in combining different disciplinary contributions “the aim is to better position the [discipline of the profession]. The knowledge base, our contributions, how we position our knowledge creation scientifically. In the realm of social science” (Lynn). Here, the term “social science” is emblematic for an alignment to the subjectivities the students access through the native and visitor modes of identification as well as to the enactment of PhD research in the Department and publication in the targeted journal.

Staying native can also imply *opposing visited territory*. When students target journals in disciplinary traditions they do not identify with in a native mode of identification, they may use references to works that they do identify with in their native mode. Mina states: “I always use [name of author]. I used him in my master’s thesis” and continues:

I feel that this [particular citation] is an X-disciplinary torch thrown into the camp of Y disciplinarians. [Name of author] is in fact an X-disciplinarian. He kind of states that he sees [the phenomenon] from an X-disciplinarian’s viewpoint. That’s what he thinks he’s bringing in. Yes. So I still feel like an X-disciplinarian. [Mina]

It was important for Mina to keep [name of author] as a justification for her argument even when targeting a [Y-field] journal. She understood this instance of linking information in her argument as a way of *contesting the assumptions* of Y-discipline, and *demonstrating the strength of others*, i.e. X-disciplinarians. However, as it turned out, she was rejected. In the third interview, she concludes that her X-disciplinary torch has been extinguished. “I’d been looking forward to [throwing the torch]. It fell apart. That’s annoying” (Mina). Instead, Mina submits to a journal that appears to have more of a social science outlook. Before doing so, she elaborated the citation from the X-disciplinarian mentioned above and strengthened it by *bringing in a broad gauge classic*.

We refer to the second re-alignment as *I-disciplinary footing*. This re-negotiation emphasizes citizenship that amalgamates identifications in native and visitor modes. Alex explains that discussions in his research group mostly focus on research questions and methods, and states: “In a way, I’ve become less disciplinary, or what’s the difference, I’ve become less of a disciplinarian and more of a methodologist. Again, you can apply that competency in many contexts” (Alex).

Alex draws on a citizen mode of identification; in his empirically-oriented research group, they “do method”. However, when submitting to international journals, “you need to turn it into a story”. As he explains, “it’s not the data, or the method, you need to turn it into an instance of something larger”. The international journal he submitted to asked him to include a particular body of literature to substantiate his argument about the phenomenon he was exploring.

[The reviewer] was probably a Y-disciplinarian. Y-disciplinarians are – my supervisor is kind of sceptical towards them – I’m less so, in terms of Y-disciplinarians being more individual-oriented in their explanations [...] But at the same time, they include more explanatory factors. (Alex)

Alex sees a need to include various explanatory factors. Hence, he points out a particular reason for choosing a particular journal. The name of the journal alludes to a broad body of literature, which is

promising because “explanations [of our results] may be [X-, Y- or Z-disciplinary], which is a good thing regarding [particular body of literature]. It’s broad. Draws upon various fields” (Alex).

Alex expresses accountability towards the methodological project of his research group. He seeks to fit the theoretical framework to the statistical model he and his group are using by placing the Y-disciplinary recommendation by the reviewer in a broader context of disciplinary perspectives.

The informants may also begin with journals with a profile that fits the identification with the subject positions of “doing social science”. To Brit, Z-disciplinary journals are not an option because “I’m not doing [Z-disciplinary] research. That’s kind of important to me”. Simultaneously, confining herself to journals within her X-profession is not an alternative either: “I just cannot. How many journals do we have to choose from? The journal I’m submitting to now isn’t [X-profession], it’s social science. Broader. Really broad”.

Brit and Alex exemplify how the above subject positions may produce a citizenship that bridges the gap between local practices in the Department and global practices, when they publish. In communication with his research group, Alex *demonstrates the strength of others* by including particular disciplinary explanations. However, he does so by *measuring the dose*.

We name the last re-alignment *going native*. It emphasizes a citizenship that privileges identifications in visitor mode over native mode. Informants may choose to submit to Y-disciplinary journals, or simply end up submitting to these after rejections elsewhere. Justin explains that this applied to all his three articles: “So [my project] has become a far more [Y-disciplinary] project than I intended at the outset”. He could not find Y-disciplinarians to support his use of the X-disciplinary method. Instead, he took a Y-disciplinary PhD course to gain a better understanding of their key concepts, which he found useful in relation to a review on his last article:

I have to explain [key concept]. I’ve been specifically told to use [name of Y-disciplinary author], because he speaks about [the concept]. I need to clarify the difference between [concept 1] and [concept 2]. Sorry, now I’m speaking a quite Y-disciplinary language. [...] I did agree with the comments. I knew I had to sort out the concepts. (Justin)

Justin further explains the removal of a reference to a particular way of applying the key concept that he used in his master theses: “I have not used [name of author] that much here. Because if I did I would have to explain myself a lot more”. He is thus less keen on pushing the Y-disciplinary boundaries of argumentation, and more focussed on relying on Y-disciplinary kings and queens. In Justin’s case, the negotiations of subject positions in the setting of a Y-disciplinary journal privilege identifications in visitor mode, which both detaches him from identifications in native mode, and makes citizenship within practices in the Department problematic:

How should I argue? It falls between two stools. [...] I have a responsibility towards [X-profession]. Then there’s the tradition of [Y-disciplinary analysis]. There’s a lot to be addressed when I get to the extended essay.

When publishing with journals, the informants negotiate subject positions (see Figure 1). In terms of subjectivity, this happens through the four above-mentioned realignments of identifications. In terms of citation, it takes place through combining understandings of ways of linking information in the argument.

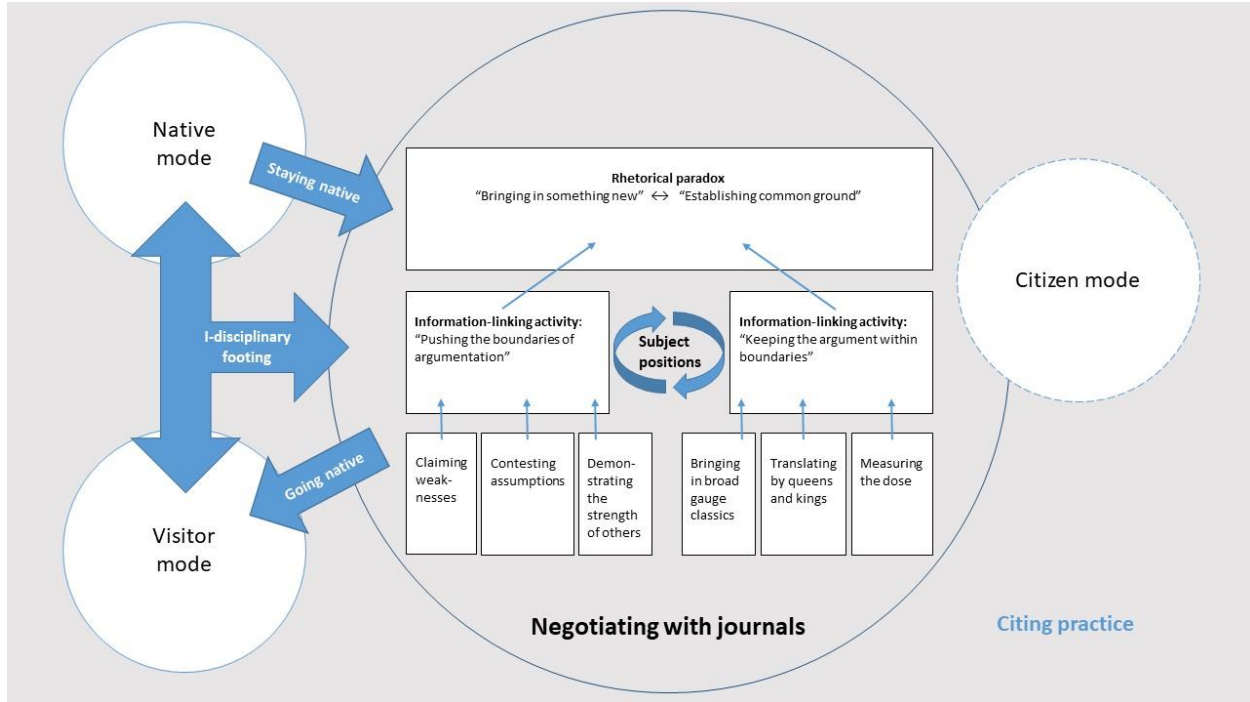


Figure 1: Negotiating subject positions when citing in emerging interdisciplinary fields

### Concluding discussion

Argumentation aims at convincing an audience, i.e. the third player. In our informants’ understanding, this implies balancing introductions of new ideas with securing common ground in communication. This is in line with Berkenkotter and Huckin (1995, p. 59), who describe how reviewers demand specific intertextual frameworks for new or locally produced knowledge. Hyland (2004) views citations as manifestations of such frameworks and points out how writers must establish “a plausible relationship with the discipline’s epistemological framework” (p. 13). Thus, a rhetorical paradox of argumentation is by no means unique to interdisciplinary publishing. However, our study indicates that the implications of the paradox are particularly complex when publishing work that belongs to emerging interdisciplinary fields with no established communication fora of their own. Our analysis has shown that through the different understandings of linking information in the argument, the informants negotiate subject positions across the established X-, Y- and Z-disciplines and the emerging I-discipline. This insight illuminates three interrelated phenomena, namely the structuration of PhD students’ citing, their coming to agency as scholars, and emerging interdisciplinarity as a phenomenon. We will discuss these in turn.

Through the modulation of identifications taking place in our informants’ accounts, we gained access to the normative texture of the citing they are enacting, i.e. to aspects of the structuration of the citation practice. Our informants reveal what is important to them, e.g. strengthening the status of their X-professions, consolidating X-disciplines by introducing insights from Y-disciplines, or building I-discipline by amalgamating the X’s and the Y’s. They negotiate this normativity through subject positions ringed about in the writing and publication processes, such as Mina giving up on “throwing an X-disciplinary torch into the camp of Y-disciplinarians”. Through negotiations with available journals unforeseen subject positions emerge. Thus, at a level of structuring properties, the normative regulations of citing

can be seen as a continuous and open-ended “discursive ‘accomplishment’ between practitioners as they negotiate acceptable and expected conduct” (Schreiber, 2014, p. 350; cf. Halkier and Jensen, 2011, p. 106.). This open-endedness at the level of structuration defies textbook descriptions of PhD learning. Our analysis challenges the view that “PhD students’ writing is shaped by discipline-specific conventions and protocols; by conversations with advisors who literally embody the discipline and institution” (Kamler and Thomson, 2008, p. 508).

The use of citations is part of students’ growing into agency. They bring in allies to claim weaknesses, to demonstrate the strength of others, to tie in with kings and queens and to measure the doses. However, within the rhetorical situation, the sayings, including citations, of the interlocutors have mutual positioning effects. This means that the students’ positioning in scholarly argumentation is not a pure strategic self-presentation. A central point in Davies and Harré’s (1990, p. 48) work on subject positioning is that “conversation unfolds through the joint action of all the participants as they make (or attempt to make) their own and each other’s actions socially determinate”. Subject positions are joint accomplishments. With reference to Bakhtin, we can point out a deeper personal implication of this dynamics in argumentation (Tindale, 2004). The person “is a dialogic, still unfolding, unique event” that is situated on the boundaries between self and other (Tindale, 2004, p. 102), or as Taylor (2004, p. 35) says, selves can only be enacted with reference to surrounding others. Convincing an audience becomes constitutional also for the arguer’s subjectivity. Communication with others depends on the positions available within discursive practices (Davies and Harré, 1990, p. 46). The third players are constantly shifting between X-, Y-, Z- and I-disciplines, which increases the unpredictability and open-endedness of students’ future scholarly subjectivity.

Becoming a scholar is a matter of subjection, i.e. power. The informants seek subjectivity that reflects identifications important to them by negotiating subject positions through information-linking activities. When submitting articles to journals, however, the students become bound to specific audiences and citing practices, which means that not all identifications become expressible (cf. Wenger-Trayner and Wenger-Trayner, 2015, p. 25). Some subject positions are made to count while others are invalidated (Davies and Harré, 1990). This implication differs from Pilerot’s (2016) study on PhD students who navigate scattered literature, develop vocabulary and position themselves by recognizing cognitive authority within an interdisciplinary field of design research. Pilerot (2016, p. 429) indicates that the students become scholars by extracting “socio-material practices shaped by historically developed conceptions of what it means to be a design researcher”. It is precisely such hegemonic control of conceptions of what it means to be an I-disciplinarian that is lacking in our informants’ situation. The emerging I-discipline has no historically developed or agreed conceptions, nor does it have accommodations such as publishing arenas. To our informants, cognitive authority is not identifiable within consistent teams of third players because they are up against a variety of players. Their coming to agency is enacted, re-enacted and differently enacted across X-, Y- and Z-disciplines. However, options are available, because a position is a resource by “which the discursive practices constitute the speakers and hearers in certain ways and yet at the same time is a resource through which speakers and hearers can negotiate new positions” (Davis and Harré, 1990, p. 62). In our view, this opens an important space for reflexivity.

The differences in the situation described above lead to an interesting observation regarding interdisciplinary research and education as a phenomenon. Madsen (2018) identifies two major discourses at work in the literature on interdisciplinarity. First, within the “integration-premised-



discourse”, interdisciplinarity gains its identity in relation to something it is not, namely disciplinarity or pseudo-interdisciplinarity (cf. Klein, 2017) such as multidisciplinarity. In this discourse, *integration* is “the nodal point that serves to partially fix the meanings of the two entities” (Madsen, 2018, p. 464). Integration becomes the litmus test of interdisciplinarity (Lattuca in Klein, 2017). A consolidated field, such as Pilerot’s design research, seems to pass the litmus test as the purposes and arrangements around which integration unfolds are stabilized. In contrast, the I-discipline in our study would probably fail the test. Our informants’ modulations of identifications are more readily explicated within Madsen’s “discipline-inclusive-discourse” (Madsen, 2018), where *knowledge* replaces *integration* as the nodal point. Disciplinary and interdisciplinary knowledge are not treated as mutually exclusive; instead they are interdependent and both are “dynamic knowledge forms whose boundaries and practices are continuously in flux” (Frickel et al. cited in Madsen, 2018, p. 466.)

In conclusion, interdisciplinarity as a discipline-inclusive-discourse resonates with the situation faced by our informants. Epistemological interdependence necessitates knowledgeability in the multiple ways of thinking across fields and disciplines, as well as in the negotiations of disciplinary differences within the emerging I-discipline. In line with Wenger-Trayner and Wenger-Trayner (2015), we have described how this knowledgeability is acquired and demonstrated through the modulation of identifications. The implication for the ‘scholars in the making’ is an open-ended process of coming into agency, where the development of subjectivity is premised by the interdisciplinary situation of modulating identifications across the fluxing boundaries between X-, Y-, Z- and I-disciplines.

Our study shows that becoming a scholar within an emerging interdisciplinary field is a highly demanding endeavour. The study strengthens Lee and Boud’s (2009, p. 104) argument that a shift is needed from viewing doctoral work in terms of what the students produce, e.g. articles, to “the production of the person who researches”. This is complicated, they point out, because successful PhD students do not simply join existing disciplinary communities, but make wider contributions through “different modes of knowledge production and research technique from those into which they were inducted” (Lee and Boud, 2009, p. 104). Our analysis deepens this understanding by demonstrating citing as a mechanism in the negotiations of different modes of knowledge production and the subsequent formation of PhD students’ subjectivity.

When policy-makers encourage interdisciplinary education, little attention is given to the conflicts and uncertainties related to the interplay of different scholarly practices that are inherent to emerging fields. With Lee and Boud (2009), we see a need to examine more closely how those involved, e.g. research groups, supervisors and librarians, can assist these students in their research and learning. To build dialogue around conflicts and uncertainties in emerging interdisciplinary fields, we must acknowledge the ontological primacy of the practices through which interdisciplinarity is enacted in particular situations. In the Department, this is probably not achieved primarily within an integration-premised-discourse, as there are few, if any, stabilized conceptions around which such integration is articulable. Instead, a discipline-inclusive-discourse seems more relevant at this stage of I-discipline’s development.

We have explored the enactment of interdisciplinarity through one particular aspect of scholarly argumentation, namely that of citing. We believe that addressing two delimitations of the present study would be fruitful in future studies. Firstly, we conducted longitudinal interviews with students in only one PhD programme. Comparative research on PhD students in other programmes, both disciplinary and interdisciplinary, would enrich our understanding of the particularities of citing processes in

emerging interdisciplinary fields. Secondly, we only analysed interviews with PhD students. Comparative work on senior researchers would be advisable to enhance our understanding of whether the challenges discussed in our study are particular to research novices, or whether they are characteristic of research in not-yet-stabilized interdisciplinary fields.

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## Note

1. We use the term social constructivists in line with Nicolaisen's (2007, pp. 619-620) account. The term refers to authors focusing on social realities as produced by scientific communities and scientific research, as opposed to those studying social reality as produced through the cognitive efforts of people in everyday settings.

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