THE STRUCTURE OF PHILOSOPHICAL DISCOURSE

by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Motivated by the lack of research that has explored the rhetorical structure of research articles in the humanities, this dissertation analyzes professional philosophical discourse using move-analysis as an approach. A corpus of 60 research articles was compiled from some of the leading philosophy journals. The articles were selected from three sub-disciplinary areas: (a) metaphysics and epistemology, (b) the history of philosophy, and (c) ethics. To analyze the articles, a move analysis codebook was developed, which identified the rhetorical functions (i.e., moves and steps) that different text segments played. The codebook was then applied to the entire research article structure of the 60 research articles. Linguistic features of certain functional units were also identified via corpus analysis techniques. The results of the study show that rhetorical structure of philosophical writing is distinctive compared to other fields and disciplines. On one hand, at the macro level, philosophical writing uses a problem-solution structure rather than the IMRD (intro-methods-results-discussion) structure, common in the social and natural sciences. At the move and step level, philosophical writing heavily relies on evaluation to critically analyze solutions to philosophical problems. Finally, the dissertation found systemic rhetorical functions that permeated the entire research article. Most notably, philosophers heavily qualify and outline their arguments throughout the text.

CHAPTER 1 : INTRODUCTION

1.1. Genre and Move Analysis

Genre analysis has been a prolific research paradigm in the English for Specific Purposes (ESP) tradition during the past several decades. This research approach takes as its fundamental unit of analysis *genre*, which can broadly be characterized as type of communicative event. To analyze genre, many ESP researchers have employed a methodology known as *move analysis*, which attempts to uncover the discourse structure of a text by examining its functional parts. Since Swales' (1990) seminal work in this area, move analysis research has examined a wide array of genres in academic contexts, such as the grant proposal (Connor, 2000), conference proposal (Halleck & Connor, 2006), conference abstract (Yoon & Casal, 2020), lecture (Lee, 2009), and textbook (Parodi, 2010). The greatest amount of research, however, has targeted the research article, and numerous studies have explored the rhetorical organization of research articles across a wide range of disciplines, especially those within the natural and social sciences. This focus has been motivated by the pedagogical and largely practical orientation of the ESP tradition: ESP research is often used to derive pedagogical implications that can help second language (L2) learners in academic contexts. The focus on the research article has been driven by the need to teach linguistic and rhetoric conventions to graduate students to help them master the literacy practices of their fields, and the focus on the natural and social sciences is due to the fact that these are the fields where the greatest numbers of L2 students study in the United States.[1]

Despite the large amount of move analysis research that has been carried out on the research article, work remains to be done. Most outstanding, the extant research has not adequately examined research articles in the humanities as well as research articles that do not utilize the IMRD (intro, methods, results, discussion) framework. In addition, there have been recent methodological developments in move analysis studies, most notably, the use of corpus-based approaches (Biber et al., 2007) to examine what Moreno and Swales (2018) refer to as the "function-form gap", the lack of understanding about the linguistic features used to carry out rhetorical moves and steps. Mixed methods approaches combining move analysis with corpus

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[1] See the Institute of International Education for details: https://www.iie.org/Research-and-Insights/Open-Doors. In past years, some of the top three fields of study for international students have been engineering, math and computer science, and business and management.

linguistics have been popular in recent years, with researchers examining linguistic features of moves such as lexical bundles (e.g., Cortes, 2013; Mizumoto et al., 2017; Omidian et al., 2018), metadiscourse (Del-Saz Rubio, 2011; Jiang & Hyland, 2016), and syntactic complexity (Lu et al., 2020; Tankó, 2017).

In order to continue this tradition of exploring disciplinary writing in academic contexts through the theoretical construct of genre and through move analysis, this dissertation targets a specific discipline in the occluded field of the humanities.

1.2. Research Problem and Motivation

Not only have the humanities received little attention in move analysis research, but the little extant research has either tended to be a part of large-scale, cross-disciplinary studies (e.g., Arsyad, 2013; Durrant & Mathews-Aydınlı, 2011; Hyland, 2004) or it has focused on a limited part of the research article (e.g., Tankó, 2017; Tucker, 2003). Because of this, such research has tended to lack the comprehensiveness and depth that comes with targeting the entire research article of a single discipline. To some degree, the lack of move analysis research on the humanities is understandable due to the relatively few international students that study the humanities in the US in comparison to other fields.[2] This research is nonetheless important and needed in order to expand our understanding of the writing practices across the full range of academic disciplines. Furthermore, particularly in the humanities, there is likely greater variation in the rhetorical structure of research articles than the natural and social sciences since the articles do not follow the IMRD format. In fact, one might wonder whether the humanities have a standard rhetorical structure at all and to what extent disciplines in the humanities vary in rhetorical structure.

To begin making headway on this problem, this dissertation examines the rhetorical structure of a single discipline in the humanities: philosophy. A focus on academic research articles in English language philosophy[3] is motivated by several factors. First, many of the leading

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[2]For example, according to the Institute of International Education, only 2.7% of all international students were enrolled in disciplines in the humanities: https://opendoorsdata.org/data/international-scholars/major-field-of-specialization/

[3]By "English language philosophy" I mean scholars who write about philosophy in English. This is not limited to the study of philosophers who originally wrote in English. English language philosophy could include the large body of commentary and research written in English about Aristotle, Plato, Descartes, Confucius, Sartre, Nietzsche, etc.

philosophical journals today publish predominately, if not exclusively, in English.[4] Furthermore, much of English language philosophy relies on other research written in English. Over two decades ago, a study found 84.6% of citations in English language philosophy articles were to other English language sources[5] (Cullars, 1998), meaning that philosophers writing in English at that time predominately engaged with texts written in English. While this research needs to be updated to draw more definite conclusions, there is little doubt that this trend has continued into the present. As a consequence, for burgeoning scholars entering the field of philosophy, being able to publish and read English language philosophy texts is paramount.

A focus on philosophical writing is also motivated by recent events in the local context: Purdue's philosophy department has launched a master's level graduate program in philosophy for international students.[6] The curriculum of the program involves both graduate seminars in philosophy as well as literacy-focused classes that aim to improve students' reading and writing skills. Ultimately, the program aims to place students into PhD programs where English is the medium of instruction. A genre analysis of professional philosophical writing could be used to inform and help develop the curriculum of this program and others like it. Thus, this research project aims to conduct a genre and move analysis of English language philosophy research articles.

1.3. Research Questions and Significance

The project addresses the following research questions:

1. What is the rhetorical structure of philosophical research articles written in English?
2. What moves and steps characterize the major sections of the research articles?
3. What linguistic features are distinctive for moves and steps?
4. To what extent is there variation in discourse structure across research areas in philosophy (e.g., the history of philosophy and ethics)?
5. How does the discourse structure of philosophical research articles compare with research articles in other fields and disciplines (based on the extant move-analysis research)?

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[4] This includes journals such as *Nous*, *The Philosophical Review*, *Ethics*, and the *British Journal for the Philosophy of Science*.

[5] It should be noted that 25.4% of all citations were to texts that were translations into English. This means 36.9% of citations were to sources that were originally not written in English. As Cullars (1998) notes, the reliance on texts written in English—translated or otherwise—"probably reflects the diminishing mastery of foreign languages even among the highly educated in the English-speaking world" (p. 60). On the other hand, this may also be explained by the specialized vocabulary required to carry out research, which goes beyond mere mastery of a language.

[6] For details, see https://cla.purdue.edu/academic/philosophy/students/graduate/maprogram.html

This research has several types of impact within genre tradition as well as more broadly within applied linguistics:

- *Socio-linguistic significance:* This research adds to the large body of move analysis and genre analysis research that has extensively explored academic writing across a wide range of disciplines. Specifically, this dissertation will advance our understanding of the under-explored field of the humanities.
- *Theoretical and methodological significance*: The research further refines and advances a theory of genre grounded in semantics. More specifically, a frame-based model of genre is put forth. The research also refines and further develops move analysis as a methodology by drawing upon the frame-based model and by drawing a distinction between two types of rhetorical functions.
- *Pedagogical significance*: This research can be used to inform pedagogical practices aimed at helping writers better understand the discourse structure of philosophical texts. Such research may prove particularly useful for advanced L2 writers entering the field of the philosophy.

1.4. Outline of Dissertation

Chapter 2 introduces the genre analysis framework based of the ESP tradition. The chapter first lays out the framework based on Swales' (1990; 2004) works. The chapter then offers a comparative analysis of the ESP genre framework by juxtaposing it with the systemic functional linguistics tradition, the corpus linguistics tradition, and rhetorical genre theory. The chapter also summarizes and addresses recent changes and criticisms in regard to ESP genre theory.

Chapter 3 advances a theoretical framework of genre grounded in cognitive linguistics and theoretical semantics. The framework is based on frame-based and script-based semantics, speech act theory, prototypicality effects, and basic level concepts. Overall, this framework holds that genres can be represented as a frame for a complex communicative event. The essential frame element of a genre is its communicative purpose, which is broken down into its perlocutionary and illocutionary aspects.

Chapter 4 provides a literature review of genre and move analysis. The first part of the chapter analyzes and synthesizes move analysis research pertaining to the research article genre. This part also examines linguistic-focused move analysis research that has been carried out by corpus methodologies. Part two of the chapter reviews the extant linguistic and rhetorical research on philosophical discourse. This chapter draws attention to recent trends, limitations, and gaps in the literature.

Chapter 5 outlines the methodology used for the study. The chapter provides an overview of the corpus and sub-corpora, the journals from which articles were sampled, the article selection criteria, and how the data was converted into a format suitable for analysis. The chapter also describes the data analysis procedures, including move analysis as a methodology, the coding procedures, and the software used for the project. The chapter concludes by discussing methodological issues and solutions.

Chapters 6, 7, and 8 present and discuss the results of the data analysis. Chapter 6 focuses on the macro-structure of philosophical discourse and analyzes the macro-moves used by philosophers. The chapter also examines patterns and cycles of macro-moves. Chapter 7 analyzes and discusses the moves and steps used in each macro-move. Finally, Chapter 8 analyzes and discusses systemic functions used in philosophical writing. Chapter 9 then concludes the dissertation by summarizing the research findings, discussing the significance of the research, and considering limitations and future research directions.

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CHAPTER 2 : THEORETICAL FRAMEWORK

2.1 Introduction

The theoretical approach to genre adopted in this dissertation falls into the ESP and L2 writing traditions. Some of the leading scholars in this tradition include John Swales (1990; 2004, 2011), Vijay Bhatia (1993; 2008), Christine Tardy (2009a, 2016), Brian Paltridge (1994, 1995, 2012), Ian Bruce (2008), and Sunny Hyon (1996, 2017), among others. Swales' (1990; 2004) genre framework, however, has been the most influential on this tradition, and it has been integral for the development of move-analysis as a methodology, which is the primary methodological approach used in this dissertation. Furthermore, despite changes and modifications to this framework, the main tenets of Swales' approach to genre have largely remained in-tact. Therefore, Swales' framework will be the primary point of departure for developing a genre theory in this dissertation.

This chapter has three goals. First, the chapter aims to provide an exposition of genre theory in the ESP tradition, focusing on Swales' theoretical framework. Second, the chapter will conduct a comparative analysis, situating the ESP genre tradition within the broader interdisciplinary space. This will involve examining genre in the systemic functional linguistics tradition, the corpus tradition, and the rhetorical genre theory tradition. This comparative analysis will help to further flesh out the ESP conception of genre, both by drawing contrasts between the traditions and noting how ESP genre theory has been influenced by these traditions. Finally, the chapter will review criticisms and recent changes to the ESP genre tradition and will note additional challenges that remain to be addressed.

2.2 ESP Genre Theory and Swales' Framework

In the ESP tradition, genres are viewed as text types used by discourse communities to achieve their goals. What has made this tradition most distinctive from others is not so much its theoretical framework, but rather (a) the emphasis on pedagogical implications of genre-based research (focused primarily on second language users of English studying English for academic purposes) as well as (b) the targeted genres that are studied (predominately, academic discourse). That said, as will become clear below, ESP genre theory does have a distinctive characteristics,

and no single author has been more influential in defining genre in the ESP tradition than John Swales (1990; 2011).

Swales defines *genre* as "a class of communicative events" whose members "share a set of communicative purposes" (Swales, 1990, p. 58). It is important to emphasize, then, that genres are *categories* or *types* of communicative events, which are distinguishable from the particular communicative events we bear witness to, which are *texts or tokens*. In other words, just as we classify particular living organisms and particular artifacts into kinds of things, so too whenever we encounter some text, we see it not just as a *particular* thing but also as a *kind* of thing. This immediately raises the question of what, exactly, a *kind* or *category* is—a metaphysical question that has long been a longstanding philosophical problem (see Armstrong, 1989). In this dissertation, the questions surrounding the nature of kinds and categories will be approached through the lens of cognitive linguistics and semantics (in Chapter 3), specifically through discussions on prototypicality and frames (e.g., Croft, 2004; Fillmore, 1976; Löbner, 2013; Nirenburg & Raskin, 2004; Rosch & Mervis, 1975; Taylor, 2003).

In Swales' theoretical framework, the defining feature of a genre is its *purpose* (sometimes referred to as *function*). This is not to imply that purpose is the only aspect of a text relevant for genre classification. Texts are classified as genres on the basis of having similar content, formal, and contextual features (Hyon, 2017). With respect to formal features, texts of a genre tend share lexical properties, syntactic structures, and discourse schemata. For example, scientific research articles tend to employ a three-move discourse structure in the introduction of the work (see Figure 2.1 below). With respect to contextual or situational factors, there may be similarities in the medium and mode of delivery and the typical audiences that are addressed. For instance, the very name "email" indicates a consistent mode of delivery for this genre, and "newspaper" indicates the now somewhat antiquated medium of that genre. Finally, with respect to content, genres tend to address similar topics. For example, newspapers report on current events, and sermons address moral and religious issues. Nonetheless, in Swales' framework such features do not occupy the same privileged position as does communicative purpose since a text's purpose is an essential condition—a *sine non-qua*—for it to be classified as a member of a genre. In other words, when the purpose of a text does not match the characteristic purpose of a genre, the text is not classified as belonging to the genre, despite how similar the formal, content, and situational features may be. Following Swales, this is evident in the case of a parody, where, despite having nearly all the other

typical features of a genre, it is nonetheless viewed as a different kind of communicative event due to its purpose.

The privileged position of purpose can also be attributed to its role in constraining and fixing other textual aspects, most outstanding, the discourse structure of the genre (variously referred to as the *schematic structure*, *cognitive structure,* and *rhetorical structure*) (Bhatia, 1993). How purpose (semi)-determines discourse structure is the result of both cognitive and social factors. With respect to the former, certain discourse structures may be particularly suitable for cognitive processing. For instance, Brown and Yule (1983) note that narrative structures often proceed by way of listing causally connect events in chronical order. Since this reflects the way events occur in real-life, this structuring may be preferred cognitively given that the purpose is merely a retelling of some complex event (alternatively, imagine a retelling in reverse chronological order and the difficulty of processing causal links). Thus, in a genre such as the research article, the retelling of the experimental methods partially reflects this cognitive structuring, with researchers typically describing first how the data was collected, then how it was analyzed, and then the results of this analysis. Bruce's (2008) research on cognitive genres goes further in that connects not only the characteristic purpose of a genre with the discourse structure, but it also then relates how the discourse structure is built via formal features (syntactic structures and logical relations) that tie together individual propositions. For example, if one's purpose is to give a report on some issue or event, this typically follows a pattern of moving from the general to the particulars and details, and this results in the common occurrence of amplification propositional relations (i.e., one proposition provides details about specific aspects of the other).

On the other hand, social factors must also be called upon to explain discourse structure. In particular, social conventions may ultimately explain why certain structures become typical of a genre, for cognitive factors alone often leave structural decisions underdetermined for the author (not to mention authors may make certain unconventional decisions for rhetorical effects). Speaking to this point, Tardy and Swales (2014) hold that conventional discourse structures arise as a result of communicators developing effective strategies for accomplishing their purposes— strategies which are used time and again due to their effectiveness. Over time, this can result in a conventional set of strategies (i.e., the rhetorical moves and steps of the genre) becoming relatively fixed. That social factors might underlie the fixing of rhetorical structures is evident from move- analysis research comparing different fields of study and different cultures/languages (e.g., Bruce,

2009; Kwan et al., 2012; Lim, 2010; Loi & Evans, 2010; Sheldon, 2011). For example, exploring how different groups of writers structure research article introductions in applied linguistics, Sheldon (2011) found that Spanish L1 and English L2 writers (with Spanish L1 backgrounds) were much less likely to use steps such as *outlining the structure of the paper*, *announcing principle outcomes*, and *stating the value of the present research* than were their English L1 counter-parts. If cognitive factors alone could explain the production of discourse structure, such variation across social variables would be a surprising result.

It should also be noted that, while discourse moves as well as linguistic features (such as grammatical patterns) are not deemed as *essential* features of texts belonging to a genre (i.e., such features do not necessarily have to be present in order for a text to be classified as a member of a genre), some such features are strongly associated with genres. To account for this strong association, Swales argues that genres have *prototypical* features. Based on research from Elanor Rosch (Rosch, 1975, 1983; Rosch & Mervis, 1975), *prototypicality* refers to a set of empirical observations about how humans categorize. The studies found not all members of a category have equal standing; rather, some members appear to be more central than others. The central members, to which some loosely apply the term "prototype", tend to have a bundle of features most frequently associated with the category; however, non-central members tend to lack some of these features.[7] Applied to genres, one could say, for example, that while a prototypical research article might contain certain rhetorical moves, such as an explicit *purpose statement*, these rhetorical moves are not necessary for category membership. In other words, if a text lacks a purpose statement, it could still be classified as a research article.

While rhetorical structures and discourse moves are deemed as prototypical and not as essential, they do nevertheless occupy a special place in Swales' framework, for these textual aspects are the primary means by which a genre's purpose is accomplished. A discourse analysis

[7]Following Lakoff (1987), it is important to not confuse *prototypicality effects* with a *theory of prototypes*. What Rosch's empirical work shows is that the so-called "classical theory of categorization" is inadequate. The classical view sees categories as defined by a set of necessary features, which jointly constitute sufficiency for category membership. This view implies that all category members are *equal* members (the theory has no way to account for one member being a more exemplar category member than another). For instance, the category BIRD could be deemed as having the following necessary features: *can fly*, *wings*, and *beak*. The problem is twofold. First, clearly, not all birds seem to equally be birds: Robins and sparrows seem like better examples than penguins and ostriches. Second, some of the purported necessary features are not actually necessary, leading some to wonder whether categorization even makes use of necessary conditions. In response to prototypicality effects, a number of theories have been put forth. For an overview of prototypicality effects and theoretical responses, see Taylor (2003) and Saeed (2016).

of the moves and steps (a *move analysis*), then, is a functional analysis, whereby a text is analyzed in terms of these functional units. To a certain respect, this analysis can be seen as akin to analyzing speech act sequences, where a speech act sequence is understood as an ordered set of speech actions (Félix-Brasdefer, 2014). Perhaps the main difference in such approaches is the kinds of communicative events investigated: Speech act sequences usually refer to spoken interactions (e.g., service encounters), while move analysis is more often applied to written discourse. The relation between speech act theory, genre, and move analysis will be further explored in later chapters of this work.

Figure 2.1 below shows Swales' (1990) move analysis of research article introductions in the natural sciences. As can be seen in the figure, the main communicative purpose of the introduction is to create a research space (CARS). This is accomplished by three main rhetorical moves, which all work together in advancing this purpose. In addition, the introduction works together with the other major sections of the work to help advance the main communicative purpose of the research article genre: To make advancements on some research problem.

Research Article Introduction

1 Establish Territory
- 1 Claim centrality *and/or*
- 2 Topic generalizations *and/or*
- 3 Review of research

2 Establish Niche
- 1A Counter-claim *or*
- 1B Indicate gap *or*
- 1C Question raising *or*
- 1D Continue a tradition

3 Occupy Niche
- 1A Outline purpose *or*
- 1B Announce present research
- 2 Announce Findings
- 3 Indicate article structure

Communicative Purpose: Create a research space

Figure 2.1. Swales' (1990) CARS model of RA introductions

It should also be noted that Swales' framework does not privilege purpose at the expense of neglecting situational factors. In fact, Swales understands purpose to be a social aspect of a genre: The genre's purpose is the social function(s) it plays in the broader social environment. Furthermore, this social function must be understood in connection with the *discourse community* that uses the genre to accomplish its ends. For instance, as noted above, the purpose of the research article can be broadly construed as advancing knowledge on certain research problems in a field. This social function of the genre must be understood in connection with respect to a specific discourse community as well as the broad goals of this organization, which in this case could be construed as advancing human understanding within some field of study and making problems tractable.

In regard to how discourse communities can be demarcated, Swales posits six defining features:

1. An agreed set of goals,
2. Established communication modes and channels (meetings, newsletters, etc.),
3. Exchange of information among members,
4. Utilization of one of more genres to achieve the community's goals,
5. A specialized lexicon,
6. A threshold level of experts (Swales, 1990, pp. 24–27)

To conclude, this theoretical framework is still the approach used in ESP genre studies. Communicative purpose, for instance, has retained a central role in genre analysis, even though more recently, rather than seeing communicative purpose as a criterion researchers use to initially classify texts into a genre, it is now viewed as something that is revealed through the process of analysis (Askehave & Swales, 2001). In addition, move analysis is still one of the predominate means by which genres are analyzed, even though as Tardy and Swales (2014) point out, there are now more inter-disciplinary and integrated understandings of genre than several decades ago. Finally, even though recent definitions have placed emphasis on the importance of situational factors in understanding genres (e.g., Hyland, 2008; Tardy, 2009a), Swales' (1990) original formulation drew attention to the importance of understanding genres as socially situated and as instruments used by discourse communities for achieving their goals (Tardy & Swales, 2014).

Thus, Swales' framework has a broad back and has weathered many of the changes that have taken place over the last decades.

2.3 Situating ESP Genre Theory: A Comparative Analysis

In this section, ESP genre theory will be compared and contrasted with genre theories in related fields and disciplines. Three research paradigms in particular have had a close affinity with ESP genre theory: (a) systemic functional linguistics (SFL), (b) corpus linguistics, and (c) rhetorical genre studies. These research traditions were selected because, in developing a theory of genre, they aim at explaining similar phenomena: They have all been applied to academic contexts and have tended to focus on academic and technical writing rather than literary genres. Furthermore, all three have played a role in developing writing pedagogies, especially in higher education. The traditions were also selected because there have been fruitful cross-paradigm influences between the traditions, and a complete characterization of ESP genre theory would be remiss if it did not include a detailed description of these influences. In what follows, I will characterize each of the traditions, drawing comparisons to ESP genre theory before concluding with an overview of the similarities and differences between the research paradigms.

2.3.1 SFL's Theory of Genre and Text Types

In the SFL genre tradition—also commonly referred to as the *Sydney School*—genres are understood as "staged goal-oriented social processes" (Martin, 2009, p. 10). This conceptualization shares much in common with the ESP tradition: Genres are viewed as sequences of related speech acts (i.e., stages) that aim to accomplish some communicative purpose (goal-oriented) within a socio-cultural setting. However, this theory can be distinguished from the ESP tradition primarily based upon its theoretical underpinnings as well as its pedagogical applications and the pedagogical contexts in which it operates. Regarding the former, SFL genre theory is grounded in the works of Michael Halliday (Halliday & Matthiessen, 2004). Halliday developed two key, inter-related constructs that underpin the Sydney school's characterization of genre: *register* and *meta-functions* of language. A register is a language variety with distinctive linguistic features constrained and semi-determined by three key situational variables (sometimes called "register variables"): The *field* (the social activity taking place or what is being discussed); the *mode* (the

channel and medium through which the discussion takes place); and the *tenor* (the relationship between participants—i.e., audience and author) (Rose, 2012; Simon-Vandenbergen, 2014). Put differently, linguistic features vary based on whether the situation calls for spoken or written discourse (differences in the mode), whether the discourse is about different topics or pertains to different social activities, such as medicine or law (differences in the field), and whether the relations between the participants using the language is different, such as teacher-student interactions or colleague interactions (differences in the tenor). Situation types (i.e., reoccurring situational contexts) give rise to reoccurring patterns in linguistic use (i.e., language varieties), and it is these reoccurring language patterns in connection with the reoccurring situational variables that are referred to as registers.

While Halliday's construct of register (and register in the corpus tradition, explained below) appears to pick out a similar phenomenon referred to as *genre* in the ESP tradition, the Sydney school distinguishes between genre and register (Martin, 1999, 2009; Rose, 2012).[8] This distinction is motivated by several factors, two of which are of greatest significance: First, with respect to the register variables, there are a wide range of possible combinations; however, cultures only seem to use particular combinations, which gives rise to reoccurring forms of discourse. Thus, genres can be understood as a type of cultural constraint: genres specify "just which combinations of field, mode and tenor options [are] regularly phased into social processes" (Martin, 1999, p. 32). This helps to create a complete picture regarding the relation between the discourse, the specific linguistic constructions, and the broader cultural context: cultures structure communicative situations and their variables (the field, mode, and tenor), which in turn structure how discourse is produced down to the lexico-grammatical level (especially with respect to what meta-functions are used in the discourse, explained below). The other motivation behind distinguishing genre from register is to adequately explain the staged nature (i.e., schematic structure) of texts. While register variables can explain systematic linguistic functions that are pervasive throughout the text (e.g., the use of hedges, the use of discourse structuring words), they are not sufficient for explaining the move structure of texts (or as Martin might say, the "stages"). It would seem that these stages

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[8] Halliday, himself, did not develop a construct of genre for analyzing language (Hyon, 1996); rather, *register* was the key construct used for analyzing text types. It is also worth noting that, as Simon-Vandenbergen (2014) points out, in addition to Martin's (1999, 2009) theory of genre, another SFL conception of genre was developed by Hasan, which focused on the structural organization of texts. See Simon-Vandenbergen (2014) p. 139 for an overview.

are best explained in reference to social purposes that the discourse aims to accomplish, and these social purposes often need to be understood within the broader cultural context in which they occur.

The other key construct in Halliday's work that has impacted the Sydney's school conception of genre is the notion of meta-functions of language. These functions are broadly construed purposes for which we employ language. Three meta-functions are typically distinguished in the SFL literature: (1) the ideational function – describing the world or experience; (2) the interpersonal function – managing or addressing social relations; and (3) the textual function – linking together language into a cohesive and coherent discourse (Halliday & Matthiessen, 2004; Martin, 2009; Simon-Vandenbergen, 2014). These meta-functions are not isolated linguistic properties, sometimes occurring in one part of a text but not others; rather, they are dispersed and permeate through the entire text, much like the circulatory, skeletal, and muscular systems are diffused throughout the human body. Furthermore, just as any physical human activity can be viewed as involving all of these systems, so too, any stage of a text (in fact, any sentence within a text) is accomplished by drawing upon and using these meta-functions of language.[9] It should also be noted that the meta-functions relate to register variables: Each register variable shapes and partially determines the meta-functions used in the discourse (Simon-Vandenbergen, 2014). The tenor fixes the interpersonal functions; the mode fixes the textual; and the field fixes the ideational. For example, the tenor shapes the grammatical moods and speech acts used in discourse: If there is a superior-subordinate relationship, then we might expect to see the superior issue orders, give commands, etc.; however, if the speaker and hearer roles are switched, we would not expect to see such language functions being used.

In comparing ESP and SLF genre theory, it is notable that the theoretical underpinnings drawn upon by ESP researchers have tended to focus more upon theoretical semantics, particularly frame semantics and research on prototypicality (e.g., Bruce, 2008; Swales, 1990), although often—due to its practical orientation—ESP research has simply been more interested in

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[9] It is somewhat difficult to give isolated examples since the analysis of these features relies on the surrounding text. Nonetheless, consider the following (hypothetically taken from an academic article): *It is possible, however, that these results occurred by chance.* The ideational function conveys information about the world, in this case, that the results (which presumably had been described earlier in the discourse) were by happenstance. Examples of interpersonal functions include both the type of speech act being made (it is an attempt to inform an audience) as well as the hedge at the beginning (which establishes to the audience that the author is not certain about the information being conveyed). Finally, textual functions can be seen in (a) the discourse marker "however", which connects this sentence with the preceding discourse, as well as (b) the demonstrative "these", which refers back in the discourse to a previously introduced entity.

application than in developing theory. This is not to say that ESP genre research has been uninfluenced by SFL's theoretical tradition. Most notably, Ken Hyland (2005, 2008) has drawn upon both ESP and SFL genre traditions in his research. However, systemic functional linguistics has not served the same foundational role in influencing ESP genre theory that it has for the Sydney school.

The other notable distinguishing feature between ESP and SFL genre theory is the pedagogical environments in which they operate as well as their pedagogical aims. As Martin (2009) notes, the Sydney school was initially applied to primary and secondary school contexts in Australia. While it has also been applied to post-secondary and adult education, the ESP genre framework, by comparison, has predominately been applied in post-secondary environments, including graduate education (Cheng, 2015; Hyon, 2001; Tardy, 2009a). The Sydney School was also designed to be interventionalist, in the sense that one of its primary aims has been to redistribute linguistic resources to disadvantaged members of society (Rose, 2012). In this respect, the Sydney school could be described as having a critical pedagogical orientation. By contrast, the ESP approach to genre instruction early on (in the 1980s and 1990s) was largely pragmatic in nature; however, over the past decades critical perspectives have also informed its pedagogy (discussed in more detail below) (Bawarshi & Reiff, 2010; Benesch, 1995). A final distinction is that the Sydney School has put into practice a distinctive pedagogical approach (called a teaching-learning cycle), which involves (a) understanding the rhetorical context (purpose, audience, etc.), (b) deconstructing texts (analyzing structural and linguistic features), (c) jointly constructing texts (with the instructor), and (d) independently constructing texts. A simplified version adapted from Martin (2009) and Hyland (2007) is provided in Figure 2.2 below. While ESP approaches also focus on many of these same features in genre instruction, ESP pedagogical approaches—especially for graduate students—tend to focus more upon move-analysis and understanding the functions behind different segments of texts (e.g., Chang & Kuo, 2011; Cheng, 2015; Cotos et al., 2016).
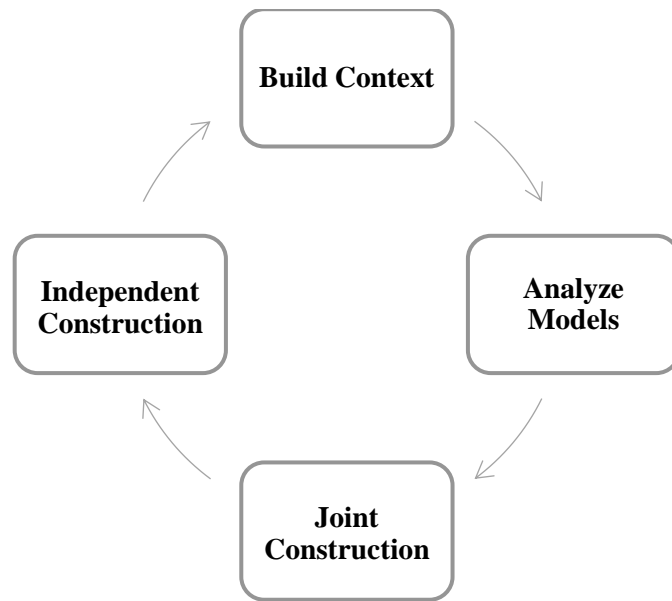
Figure 2.2. Genre teaching-learning cycle in the SFL tradition. Adapted and modified from Martin (2009) and Hyland (2007).

2.3.2 Corpus Linguistics' Theory of Genre and Text Types

The theory of genre in the corpus linguistics tradition has been most greatly influenced by the works of Douglas Biber (Biber, 1989; Biber, Connor, Upton, et al., 2007; Biber & Conrad, 2009). Before proceeding to look at Biber's characterization of text types, it is worth clearing up a potentially misleading terminological issue. Biber distinguishes between *register* and *genre*; however, this distinction is not based upon there being different objects of inquiry, but rather different methods of analysis. He argues that "we regard genre, register, and style as different approaches or perspectives for analyzing text varieties, *not* as different kinds of texts or different varieties" (Biber & Conrad, 2009, p. 15). In a register analysis, frequent and pervasive lexico-grammatical features are targeted, while a genre analysis focuses on the rhetorical organization of texts and conventional textual features that usually only occur once in a text (such as the salutation in an email) (Biber & Conrad, 2009).

That said, Biber's conceptualization of text types (to which genre and register analyses are applied) has in general been distinct from how the term *genre* (and text type) is understood in ESP genre studies, where it is mostly used to refer to text types recognized by a culture or disciplinary community (e.g., a letter of recommendation, a resume, a white paper, etc.) (Biber, Connor, & Upton, 2007). Biber's (1989) conceptualization of text types grew out of his early work, where he

31

developed an altogether different approach to identifying classes of texts than had been done previously. As noted by Biber, prior research had attempted to develop classifications based upon functional grounds (e.g., modes of discourse, such as narration, description, exposition, argument) as well as through folk-taxonomic genre theories (putative text categories identified by members of a culture, such as newspaper articles, novels, etc.). Because Biber believed that neither of these approaches adequately demarcated salient linguistic features that characterize text types, he developed a classification scheme based upon lexico-grammatical features that co-occur in texts. This method of analysis—known as a *multi-dimensional analysis*—works in the following way: Using computer-assisted and quantitative techniques, clusters of co-occurring lexico-grammatical features in texts are identified.[10] These clusters are interpreted as having a functional basis. For example, the co-occurrence of infinitives, prediction modals, necessity modals, and conditional statements, among other features, are associated with the function of persuasion. What's more, in many cases, the presence of one cluster of features relates negatively with the presence of another, and each cluster instantiates contrasting functions. For example, (a) premodifying nouns, (b) common nouns, (c) passives, (d) action verbs, (e) concrete nouns, and (f) quantifying nouns all strongly co-occur with one another. The relative absence of this cluster corresponds with the occurrence of (a) communication verbs, (b) stance adverbials, (c) proper nouns, (d) stance nouns + that clauses and (e) third-person pronouns. The strong presence of one cluster or the other relates to contrasting functions that they carry out: The former is used to facilitate the communication of compressed procedural information while the latter is aimed at facilitating the expression of stance towards the work of others (as is done, for instance, in literature reviews). Taken altogether, the entire spectrum is labeled a *dimension* (compressed procedural information v. stance towards the works of others) (Gardner et al., 2019).[11] In Biber's (1989) early work, five such dimensions were identified.

Next, individual texts are analyzed using the dimensions. For each text, dimension scores are assigned by summing the rates of occurrence for each lexico-grammatical feature of each cluster. For a given dimension, the presence of features that characterize a cluster at one end of the continuum results in a positive dimension score while their absence (and the presence of the other

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[10] Biber (1989) analyzed 67 lexico-grammatical features across 481 spoken and written texts.

[11] It should be noted, however, that not all dimensions need to have a negatively correlating cluster of features: Some dimensions are merely defined by the presence or absence of a single cluster, such as the cluster of features used for persuasive functions, noted above.

cluster) results in a negative score. For instance, using the example above (compressed procedural information), a positive dimension score would indicate the text has a high density of the first cluster of features relative to the second. Doing this for each of the five dimensions, Biber identified correlations between dimension scores (i.e., clusters of dimensions), which he considers distinct text types in English. For example, one text type, dubbed *scientific exposition*, includes texts that scored similarly in (a) the narrative dimension (the texts lacked narrative linguistic features), (b) the persuasive dimension (the texts also lacked these features), (c) the information production dimension (they contained these features), and (d) the explicit reference dimension (they also contained these features). In total, Biber (1989) identified 8 such clusters of dimensions, or 8 distinct text types.

Furthermore, similar to SFL's conception of register described above, in Biber's framework the functions of linguistic features and dimensions must be understood in reference to the situational factors that surround them: "linguistic features tend to occur in a register because they are particularly well suited to the purposes and situational context of the register" (Biber & Conrad, 2009, p. 6). In contrast to SFL, where three main situational factors were recognized (the field, tenor, and mode), Biber and Conrad identify seven such situational factors, summarized in Table 2.1.

Table 2.1. Biber and Conrad's (2009) List of Situational Factors of Registers

Situational Factor	Description
Participants	The speaker and hearer as well as the social characteristics of each
Relation among participants	The social relationship between speaker and hearer and their shared knowledge
Channel	The mode (speech, writing, etc.) and medium (e-mail, print, radio, etc.) of the discourse
Production circumstances	Conditions that allow for or prevent editing and revisions of the discourse (e.g., unplanned, unscripted real-time communication v. speaking from a prompt)
Setting	The time and place of the discourse and whether the participants share this setting
Communicative Purpose	The general (e.g., report, describe, inform) and specific (e.g., describe methods, discuss results) goals of the discourse
Topics	The general (e.g., linguistics) and specific (e.g., move-analysis) topics

Thus, for example, the frequent and pervasive use of deictic expressions in face-to-face communication (e.g., "this", "there", "here", etc.) could be seen as, in part, a function of the setting, which would be shared by the speaker and hearer; the frequent and pervasive use of honorifics and politeness features could be seen as a function of the relationship between the speaker and hearer; etc.

Thus, as can be seen, one of the main differences between Biber's conception of text types and that of ESP genre studies is that while the subject of analysis (the text types or genres) is somewhat taken for granted or assumed in the ESP tradition, in Biber's approach it is discerned through a multi-dimensional analysis. In other words, the ESP tradition lies more closely to Biber's characterization of genre as folk-taxonomic classes. Biber gives an extended commentary on this distinction which is worth considering in full:

> The present study does not attempt to identify all the basic genre distinctions in English; it only shows that the theoretical bases of genres are independent from those for text types. Genres are defined and distinguished on the basis of systematic nonlinguistic criteria, and they are valid in those terms. Text types, on the other hand, are defined on the basis of strictly linguistic criteria (similarities in the use of cooccurring linguistic features (Biber, 1989, p. 39).

However, one important distinction between Swales' (1990) characterization of genre and folk conceptualizations of genre is that the taken for granted communicative events in Swales' framework are not those of the 'folk' in general, but those recognized by experts in the discourse community under examination. At any rate, the distinction between text types and genres is important in that the two approaches may yield differing text categories, for texts that might putatively be seen as belonging to the same genre by a discourse community could be classified as belonging to different text types in a multidimensional analysis (or, conversely, texts putatively seen as belonging to different genres could be classified as belonging to the same text type in a multidimensional analysis).

Another salient difference between the ESP genre tradition and Biber's conception of text types concerns the features deemed to be essential in defining the categories. As we saw above, Swales' (1990) framework understands communicative purpose to be the essential defining feature of genres. Biber's framework, on the other hand, places emphasis on the lexico-grammatical features of texts in connection with their functions. Put differently, Swales' starts in the world

while Biber starts in the text.[12] While the function of the lexico-grammatical features is explained in connection with situational factors (one of which is the purpose of the text), Biber's framework does not grant communicative purpose the same status as it holds in Swales' framework. In addition, in Swales' account, communicative purpose is understood as a social factor: It is the social aim of the genre. In Biber's account, the communicative functions of the dimensions arguably lie closer to a cognitive conception of function, where the functions pick out cognitive acts undertaken by the author using the language (e.g., informing, explaining, interpreting, etc.).

One final difference concerns the pedagogical applications of Biber's model. While ESP approaches have tended to focus more upon features resulting from what Biber and Conrad identify as a genre analysis (especially the rhetorical organization of texts), corpus-based approaches have focused more upon features identified through register analysis (i.e., frequent and pervasive linguistic characteristics). Nevertheless, in recent years, the two approaches have largely been seen as complementary ways of helping students develop writing skills, especially in academic contexts (e.g., Cotos et al., 2016; Flowerdew, 2005; Lee & Swales, 2006).

2.3.3 Rhetorical Genre Theory

In the rhetorical tradition, the conceptualization of genre has been greatly influenced by Charles Bazerman (2012), Caroline Miller (1984), as well as Berkenkotter and Huckin (1993, 1995), among others. In this tradition, genre is understood as a form of social action (Miller, 1984): Genres are typified communicative responses aimed at accomplishing similar social goals in reoccurring communicative situations. Bazerman (2012) motivates this characterization by raising the following question: What accounts for language's capacity to convey the rich meanings we observe in the complex discourses of the sciences, the humanities, law, etc.? His answer is that "the recognizability of meaning is in large part a matter of recognizing situations and actions within which the meanings are mobilized through the medium of signs" (Bazerman, 2012, p. 227). In other words, pointing to just the written text (the "frail symbols", in Bazerman's words) would be an insufficient account of how we are able to transmit and understand meaning in complex communicative situations. What is needed in an explanation of how we comprehend meaning in real-life settings is an account of our knowledge of situational factors that surround the discourse,

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[12] I owe this framing to personal communications with April Ginther.

such as the social goal(s) the discourse is aimed at accomplishing, the audiences (real or imagined), and the institutional or cultural setting in which such discourse takes place. We are able to glean this knowledge from a particular communicative event because the exigence and the social purpose of that discourse are similar enough to previous instances that we recognize their likeness to one another. Furthermore, due to similarities in the rhetorical context, communicators draw upon tried-and-true strategies and responses to accomplish their goals. In other words, if a rhetorical strategy worked in the past for a certain kind of audience in a certain kind of socio-cultural setting to achieve a certain kind of purpose, then authors are likely to draw upon these strategies in a similar circumstance. According to the rhetorical tradition, such typified responses to similar situations are what we call *genres*.

A more robust view of rhetorical genre theory can be constructed by considering five principles of genre in the theoretical framework developed by Berkenkotter and Huckin (1993, 1995). This framework emphasizes a socio-cognitive approach, where genres are seen as "inherently dynamic rhetorical structures" that both shape and are shaped by the disciplinary communities that use them (Berkenkotter & Huckin, 1993, p. 477). Table 2.2 below summarizes the principles that underlie and support this characterization.

Table 2.2. Berkenkotter and Huckin's (1993, 1995) five principles of genre

Principle	Description
Dynamism	Genres are constantly undergoing change and evolution due to factors such as (a) the unique circumstances of a given situation in comparison to others, (b) changes in the environment and interpretations of the environment by genre users, and (c) the uniqueness of each genre user's background and life history.
Situatedness	Genre knowledge is acquired by participation in the activities of the discourse community. In other words, genre knowledge is acquired via a process of enculturation, where novel genre users are like apprentices who observe and come to understand how more experienced professionals employ genres to accomplish goals within the discourse community.
Form and Content	Genre knowledge involves both knowledge of content and form as well as interactions between the two. Regarding content, genre knowledge includes, for example, (a) the kinds of topics and details that should be included in the genre, (b) the background knowledge audiences will possess, and (c) the values and philosophical frameworks that the participants share and adhere to. Formal knowledge includes knowledge of the organizational structures and rhetorical moves conventionally used in the genre.
Duality of Structure	Genres both constitute social structures and reproduce social structures. They constitute social structures in that they are conventional forms of communication that play a role in aligning, adjusting, and orienting human communicative interactions; however, at the same time, this social structure is not an extraneous force with respect to human interaction: It is something which is created and generated through human interaction.
Community Ownership	Genre conventions are in part shaped by the values and epistemologies of discourse communities. A community with a positivist or post-positivist orientation, for instance, may well result in distinctive genre conventions in comparison to a community that aligns themselves with an interpretivists or critical frameworks.[13] In part, this can be seen as resulting from the different types of inquiry and empirical designs that such values promote (e.g., see Silva, 2005).

This understanding of genre has led rhetorical genre scholars to focus on the relation between genre and the larger social context as a primary point of analysis. Rhetorical genre scholars are interested in how genres maintain and reproduce social structures, how they establish and maintain identities, how they display community ideologies, epistemologies, and values, and

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[13]For an overview of these research frameworks, see Willis et al. (2007), pp 44-53.

how they embody procedural knowledge about how genres are carried out (Bawarshi & Reiff, 2010). For example, a classroom that uses a textbook supplemented with lectures by the instructor will likely influence how the relationship between the participants in the classroom is forged: the genres (the textbook and the lecture) may not simply constitute the audience relationship of teacher-to-pupil; rather, they may well play an active role in constructing this relationship in the environment. This can be contrasted with a classroom that uses research articles and class discussions as primary genres: the social relationship produced would predictably be closer to one of researcher-to-researcher or colleague-to-colleague. Such social relations and identities can be studied via ethnographic and case study approaches.

A final notable area of research in rhetorical genres studies has examined of how genres relate to one another. Bawarshi and Reiff (2010) make note of four distinct types of relations that have been studied:

1. *Context of genres*: All of the genres used by a society or culture

2. *Genre repertoire*: All genres used by a group or discourse community (e.g., the genre repertoire of the philosophical discourse community)

3. *Genre system*: A group of interacting genres that are used to achieve some over-arching function (e.g., the advancement of scientific research through the genre system of grant proposals, conference presentations, research article publications, etc.).

4. *Genre set*: a loosely related group of genres that achieve more specific functions than those of a genre system (e.g., the relation between reaction papers, term presentations, and term papers in a graduate seminar).

This emphasis can be seen as growing out of the central understanding of genres as social action: By studying the ways that genres relate to one another, researchers can better understand how communicators carry out and accomplish complex social purposes.

A comparison of ESP and rhetorical genre traditions reveals many similarities but also some notable differences. Both traditions define genres primarily in terms of social purpose and function. Nevertheless, rhetorical genre theory tethers their understanding of social purpose to the broader social effects and social impacts that genres have, while ESP genre theory has at times paid closer attention to what might be termed the cognitive function or cognitive purpose of a genre (i.e., the predominate cognitive act being carried out through the genre, such as *to argue*, *to criticize*, *to compare*, *to propose*) (Bruce, 2008). The emphasis on cognitive purpose fits well with the ESP paradigm's focus on the rhetorical structures of texts, where rhetorical moves can be

understood as cognitive functions that writers use to accomplish broader textual purposes. This begs the question of whether communicative purpose in the ESP tradition is more closely aligned to a cognitive or social orientation, an issue that will be taken up and addressed in Chapter 3.

Another distinction between these traditions is that while the rhetorical tradition has placed greater emphasis on analyzing the social context in reference to genre, the ESP tradition (as well as SFL and corpus linguistics) has by and large made textual properties and discourse structure focal points of analysis. Bawarshi and Reiff (2010) characterize this distinction in the following way: "in ESP genre study, context has been used to understand texts and communicative purposes while in Rhetorical Genre Studies, texts have been used to study contexts and social actions—in particular, how texts mediate situated symbolic actions" (p. 54).[14] In other words, the *explanandum* (the phenomenon to be explained) and *explanans* (the propositions or statements used to do the explaining) are reversed: ESP seeks to explain textual features via (in part) contextual features, while rhetorical genre studies seeks to do the opposite.

Furthermore, there may be deeper differences between these schools of thought than focal points of analysis as well as how what elements do explanatory work and which are viewed as in need of explanation. Because of the emphasis on the power of genres to create and reproduce social structures (Berkenkotter & Huckin, 1993, 1995), the theoretical conception of genre in rhetorical genre studies assigns to genres a more dominant role in shaping social contexts than what is often recognized by the ESP tradition. As Bawarshi and Reiff (2010) argue, "while ESP genre scholars have tended to understand genres as communicative tools situated within social contexts, rhetorical genre scholars have tended to understand genres as sociological concepts embodying textual and social ways of knowing, being, and interacting in particular contexts" (p. 54). In part, these different conceptualizations may be explained by the underlying theories drawn upon by researchers in each tradition: ESP researchers such as Swales (1990) and Bruce (2008) have sought to lay the groundwork for a theory of genre in theoretical semantics, drawing upon research on categorization (such as prototypicality) as well as frames and schema (see Chapter 3 for details). Rhetorical genre scholars, on the other hand, have turned to theories that lay in the intersection of

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[14] Nonetheless, as Tardy and Swales (2014) point out, there are several methodologies used by genre analysts (particularly those who research in the second language studies and English for Specific Purposes tradition) that are more aligned with a focus on the social environment rather than textual properties, including (a) critical genre studies and (b) research on genre and identity. Still, a review of genre-based research in journals such as *English for Specific Purposes* suggests that ESP genre researchers are more interested in textual features than those in rhetorical genre studies.

cognitive science and sociology, such as activity theory, distributed cognition, and situated cognition (Bawarshi & Reiff, 2010; Berkenkotter & Huckin, 1993, 1995).[15]

Some of the different theoretical underpinnings and focal points of analysis may be explained by different pedagogical orientations. The ESP tradition has been predominately concerned with teaching L2 English users, while the rhetorical tradition has either been more interested in a purely theoretical understanding of genre or in applications for L1 English users. It is thus unsurprising that the ESP tradition has focused more upon textual properties of genres, as L2 English users need more linguistic support. That said, it's not just the case that the pedagogical orientation has influenced the research agenda of each tradition: the theoretical underpinnings and research focal points have also influenced pedagogical applications. The ESP tradition, with its emphasis on understanding textual properties and rhetorical structures, has sought to teach these structures explicitly. On the other hand, because of rhetorical genre theory's emphasis on genres being socially situated and used to carry out social actions, this tradition has emphasized pedagogical approaches that could be described as "apprenticeship" or "enculturation" (Bawarshi & Reiff, 2010; Berkenkotter & Huckin, 1995). It some respects, the rhetorical approach to learning genres is akin to strong versions of Communicative Language Teaching (CLT), which views language as most effectively learned when practiced in authentic situations and for authentic purposes (Hall, 2017). Similarly, to acquire knowledge about how to use genres, rhetorical genre scholars would argue that learners need to be engrossed in real life rhetorical contexts that demand the use of genres to solve rhetorical problems. In strong versions of CLT, instructors tend to eschew any explicit form-focused instruction (e.g., grammatical instruction). This is not to suggest the ESP approach is akin to form-focused instruction: To the extent that the analogy holds, ESP is probably closer to a weak version of CLT, for, while maintaining the importance of teaching genres via real world rhetorical situations, the approach also tends to isolate and study discourse structures in

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[15] Activity theory is an approach to explaining human activities and interactions via a set of contextual factors. The three main factors are (a) subjects or agents (those who do the interacting), (b) mediational means (tools, both physical and mental, that assist the agents in accomplishing their goals), and (c) objects or motives (the objective or aim which the agents direct their actions at). In addition, the activity is also supported by other factors, such as norms and rules, the community, and the division of labor. Distributed cognition is similar to activity theory; however, rather than making human interaction and activities the subject of analysis, cognition is the primary subject. In this framework, cognition is viewed as being dispersed throughout the communities and the environment via artifacts and individuals. Applied to genres, this view holds that genres and genre sets help facilitate the communication of information and knowledge (i.e., "distribute cognition") between individuals. See Bawarshi and Reiff (2010) pp. 90-103 for an overview.

pedagogical environments, just as weak versions of CLT may also incorporate explicit form-focused instruction.

2.3.4 Comparative Overview of Approaches

This comparative analysis of ESP with other genre traditions has revealed ways in which the ESP theory is distinctive as an approach. While the definitions of genre in the different approaches share many aspects in common, the research focal points and the pedagogical applications most clearly exhibit how the approaches differ. With respect to research focus, the ESP approach has been distinctive in its emphasis on analyzing the rhetorical structure of academic texts. In contrast, the corpus tradition has tended to pay more attention to lexical-grammatical properties as well as how these linguistic features arise and interact with contextual variables, such as the audience-author relationship, the mode of discourse (the channel and the medium), the topic or field, etc. The SFL tradition has likewise emphasized linguistic properties and their functional relation to the context; however, this tradition has also emphasized the staged nature of genres, such as differences in the structuring of time in story genres (Rose, 2012). That said, the SFL tradition has tended to more broadly analyze genres within a culture, while the ESP approach has more narrowly focused on academic writing (professional academic writing in particular). With respect to the rhetorical genre tradition, this approach has placed greater emphasis on a sociological understanding of genre (e.g., the types of social activities that it enables, the power dynamics involved with genres, and the identities of the participants). Such differences in research focus align with differences in pedagogical approaches, especially the types of learners targeted in each tradition as well as the targeted learning objectives. A comparative overview of these approaches can be seen in Table 2.3 below.

To conclude this comparison, it should be noted that in the past decades, there has been a large amount of integration between these different approaches to genre, suggesting that the theoretical frameworks are by no means incompatible. For instance, Biber et al (2007) represents a synthesis of the corpus and ESP approaches. Using corpus-based methodologies, researchers can analyze lexico-grammatical properties of texts after conducting a traditional move analysis (e.g., Cortes, 2013). In addition, researchers have also integrated SFL and ESP approaches. Hyland's (Hyland, 2005; Hyland & Tse, 2004) research on metadiscourse, for instance—which is largely grounded in the SFL tradition—has also been used in conjunction with move analysis approaches

to genre (e.g., Rubio, 2011). Finally, Tardy (2009a) draws upon both the ESP and rhetorical genre traditions in constructing her theoretical framework and conceptualization of genre knowledge.

Table 2.3. Comparison of genre traditions

	ESP	Rhetorical Genre Studies	Corpus	SFL
Definition	A type of communicative event defined by its communicative purpose (Swales, 1990)	Typified communicative responses to reoccurring rhetorical situations, which constitute a form of social action (Miller, 1984)	Text types defined by co-occurring sets of lexical-grammatical features that have a functional relationship with contextual factors (Biber, 1989)	A sequence of discourse stages (related discourse functions) within a social-cultural setting that is goal-oriented (Martin, 2009)
Research focus	The rhetorical structure of genres; linguistic features in genres that advance rhetorical purposes; contextual factors (such as purpose) and how they shape textual features	The social actions genres are used to carry out; the social structures that constitute genres and are reproduced by them; the identities and power dynamics created by genres	Lexico-grammatical properties that characterize text types; the functional relation between linguistic features and contextual variables	Systematic linguistic functions, including ideational, interpersonal, and textual functions; the functional relation between these features and contextual variable; the staged nature of genres
Teaching applications	Explicit instruction about genre features, especially rhetorical structures; indirect learning by having students become genre analysts (e.g., Cheng, 2008; Cotos et al., 2016)	Instruction aimed at raising critical awareness about genres, including their social purposes, how they function within social institutions, how they maintain and reproduce social relations, etc. (Bawarshi & Reiff, 2010)	The development of pedagogical materials based upon corpus findings; indirect learning by having students become corpus researchers (data-driven learning) (Lee & Swales, 2006; Nesi, 2013)	Interventionalist instruction aimed at redistributing social-semiotic resources (Rose, 2012); learning via a teaching-learning cycle (see Figure 2.2) (Hyland, 2007; Martin, 2009)

2.4 Criticism and Recent Changes in the ESP Tradition

The goal of this section is to provide a more recent, up-to-date view of ESP genre theory and genre research. Many of the changes and developments in this tradition over the past decades have occurred as a response to criticisms and as a result of inter-disciplinary works. The following criticisms will be the focal points of this discussion: ESP genre theory and genre research (a) has lacked focus on context and social factors (Bhatia, 2012), (b) has been too focused on similarities between texts rather than differences (Dudley-Evans, 2000; Hyland, 2008), and (c) has lacked criticality in teaching discourse conventions (Benesch, 1995).

The first concern is that the ESP genre tradition has paid too much attention to the role that textual features and discourse structures play in genres and too little attention to the relation between genres and social factors, such as how genres impact social structures. This criticism is arguably directed more at the research tradition than the actual theoretical framework, for Swales' (1990) framework does emphasize contextual features, especially discourse community and communicative purpose. Nevertheless, it is the case that his theoretical model has largely been employed to examine the discourse structure and discourse moves of texts (or "forms" and "functions", as they are sometimes called) (Dudley-Evans, 2000; Hyon, 1996; Paltridge, 2012). This large and growing body of research (reviewed in Chapter 4) has focused particularly on these textual features within specific academic disciplines (e.g., Kanoksilapatham, 2005; Li & Ge, 2009; Posteguillo, 1999; Williams, 1999) as well as across disciplines (e.g., Bruce, 2010; Lin & Evans, 2012; Samraj, 2004). This raises the question of why this has been the emphasis of research if ESP genre theory, itself, does not neglect context. In large part, the answer is that the overall pedagogical philosophy that has grown out of ESP genre theory has focused on helping L2 learners develop expertise in the genres (either via explicit teaching or by having learners analyze genre examples) (e.g., Chang & Kuo, 2011; Cheng, 2015; Tardy, 2006). Because of the need of language-focused instruction for this group of learners, it is predictable that the pedagogical philosophy would be driven by text-focused activities. Still, research studies can have a kind of washback effect on theory, which is to say that, because early research focused on analyzing textual features, ESP genre theory perhaps did not develop as robust of a sociological understanding of genre as did traditions such as rhetorical genre studies.

In the past two decades, however, there has been an increased emphasis placed upon understanding social and contextual factors surrounding the production of genres. Bhatia (2008,

2012), for example, has stressed that genres must be understood as forms of social activity within organizations and discourse communities. He has also emphasized that the goal of genre research should not merely be pedagogical in nature, but should aim more broadly at understanding organizational behavior. This shift of focus can also be seen in more recent conceptualizations of genre, which have underscored the repeated or reoccurring nature of such communicative activities as well as the relation of communicative activities to situational and contextual factors, such as exigence. For instance, Tardy (2009a) defines genres as "typified responses to repeated situational exigencies" (p. 6). As Paltridge (2012) points out, this accentuation of context in ESP genre studies has in part come from the influence of works in rhetorical genre studies reviewed above (Bawarshi & Reiff, 2010; Bazerman, 2012). This is most notable in Tardy's (2009a, 2016) works—not just her definition of genre above, but also her quadripartite model of genre knowledge. The model underscores that, in addition to formal knowledge (knowledge of rhetorical organization and lexico-grammatical characteristics), genre expertise is also comprised of rhetorical knowledge (knowledge of audiences, social purposes, etc.), process knowledge (knowledge of how genres are created and carried out), and content knowledge (knowledge of the discourse community's topics of expertise). Furthermore, the rhetorical genre notions of genre sets and genre systems (see Bawarshi & Reiff, 2010) have made their way into ESP conceptualizations of genre and ESP genre research (Bhatia, 2008; Samraj, 2005; Swales, 2004; Tardy, 2009a). For instance, Bhatia (2008) examined how arbitration practices in India were influenced by litigation practices as well as how annual corporate reports emerged as a synthesis of two types of discourses: Accounting discourse and public relations discourse.

While this emphasis on context has not necessarily shifted the research agenda of ESP genre scholars away from textual features, it has led to a greater focus on the relation between textual and contextual factors. Examples of such research include (a) Hardwood (2006), who examined how political scientists used personal pronouns in their writings, focusing on how disciplinary sub-cultures affected their preferences, as well as (b) Bhatia (2008), who examined how text-external factors shaped corporate disclosure practices and arbitration proceedings, attending to the influence of various institutional forces. This research trend has been more ethnographic in nature, providing thick descriptions of the context in order to explain patterns of language use. It should be noted, however, that lack-of-context criticisms are still levied against ESP genre studies. For instance, Swales (2019) has recently argued that there are still too many

"circumscribed move-step analyses", that is, analyses that focus too heavily on describing text organizational patterns and not enough on contextual explanation.

A second criticism of the ESP tradition is that it focuses too much on text similarities and neglects the ways that texts within genres differ and evolve over time. When applied to ESP genre theory, the criticism is that the ESP framework conceptualizes genres as overly static and texts as largely homogenous while, in fact, typical genre patterns evolve rapidly with substantial variation across individual texts. To a certain extent, such homogenization and stabilization may be inevitable by-products of conceptualization and generalization, for when generalizing, difference is typically neglected for the sake of similarity, and when conceptualizing, a certain amount of stability needs to be posited in order for the concept to be useful. Nevertheless, if research is unbalanced and focuses too heavily on underscoring similarities across texts or on fitting texts into narrow conceptualizations, this could have both reifying and normalizing effects: On one hand, texts that may actually be evolving and distinct from one another could be viewed as members of the same kind (along with all of the conceptual baggage that this entails), and on the other hand, such linguistic and discourse patterns might be prescriptively taught in the classroom, which would only reinforce the very textual patterns that are supposed to be descriptive characteristics of genres. Even though Swales (1990) was careful to point out that such linguistic and discourse features are merely prototypical, a good deal of genre research in the ESP tradition (reviewed in Chapter 4) highlights the conventional nature of genres by making generalizations about formal and functional patterns from a corpus of texts. Thus, there may be a need to balance research focused on similarities with research focused on differences and change. In part, such a research agenda requires revising the ESP theoretical framework to facilitate such studies.

Recent works have answered the call of this challenge by foregrounding genre change, innovation, and variation. Most outstanding, Tardy (2016) fleshes out a view of genre innovation, defined as "departures from genre convention that are perceived as effective and successful by the text's intended audience or community of practice" (p. 9). Such departures include changes in linguistic or discourse structures that may be deemed prototypical of a genre. Tardy highlights that this variation must be perceived as effective in order for the change to be taken up by others and passed on, thereby innovating the genre. Tardy also proposes several elements that can be studied to better understand genre innovation, including (a) the types of innovation that occur (e.g., linguistic and discourse-functions), (b) the reasons for innovation (e.g., a lack of conventional

knowledge and desires to express one's identity), (c) the relation between innovation and the genre frame or script (i.e., how innovative individual instances of a genre are related to characteristics of the genre category), and (d) the social environment in which the innovation occurs. Bhatia (2012) provides another example of how to study genre variation and evolution, which involves focusing on how authors make use of text-external resources to create new genre forms as well as hybrid genres, a process he refers to as *interdiscursivity*. These external resources include knowledge of other genres, professional practices, and professional cultures. Bhatia (2002) also calls attention to the how individuals utilize genres to achieve private intentions, which may not necessarily coincide with the generic purposes that a genre is typically used for. This could include, for instance, a news reporter who attempts to express stance in a news report whose ostensible function is to impartially convey information. Such research highlights how individual texts may deviate from reputed genre characteristics.

Recent genre-based research has also highlighted differences across texts by examining how a single genre varies across social elements, such as disciplinary community, culture, and language. Examining cross-disciplinary differences, Bruce (2009), for instance, documented textual variations in sociology and organic chemistry research articles. In addition, looking at variation within a single discipline, Kanoksilapatham (2012) highlighted diversity in the structure of research article introductions in three subdisciplines of engineering, and Samraj (2002) explored variation in two sub-disciplines of biology. Finally, there has been cross-culture research, such as Loi and Evan's (2010) examination of research article introductions in educational psychology written by L1 English and L1 Chinese authors and Sheldon's (2011) exploration of research article introductions in applied linguistics written by L1 English, L1 Spanish, and L2 English (L1 Spanish) authors. Such research foregrounds the importance of variation and change that must be accounted for in any theory of genre.

A final set of related criticisms have been directed at the underlying educational philosophy frequently endorsed by ESP genre scholars and implied by ESP genre research. It is unclear how directly connected the pedagogical and theoretical frameworks are; however, because pedagogical approaches most certainly do impact the types of research that are carried out (which in turn may impact theorizing), the arguments will be mentioned here in brief. Such criticisms have their origins in the 1980s and 1990s, when genre-based pedagogies (and L2 writing pedagogies) came under attack for their pragmatic orientation towards education (sometimes referred to as a

"pedagogy of accommodation"). This pragmatism is an educational ideology whose primary aim is to help students acquire skills and knowledge that will assist them in accomplishing workplace tasks and thrive in their educational or occupational environments (Santos, 1992). Criticizing such an approach, scholars such as Benesch (1993, 1995) argued that L2 writing instruction and genre-based pedagogies should incorporate critical dimensions, which, instead of upholding and reproducing social structures and the status quo, should help raise student awareness about potential inequities and injustices and help empower them to change such structures. With respect to discourse and genres, such a pedagogy implies that students should question the social purposes genres aim to accomplish, the social relations that they may constitute, and the ways they advance the interests of certain groups at the expense of others (Bawarshi & Reiff, 2010). While many ESP genre scholars have certainly retained a pragmatic orientation, over the past decades the tradition has seen increases in research from critical perspectives (e.g., Bhatia, 2008, 2012; Tardy, 2009b).

Another frequently criticized aspect of ESP genre pedagogies is that they are overly explicit and prescriptive. As framed by Paltridge (2012), the worry is that the genre-based approach is "a product-based view of learning (only) and…it encourages learners to look for fixed patterns and formulae for their writing" (p. 356). However, more recently, genre-based pedagogies have expanded their pedagogical perspectives, with product-based approaches only constituting part of the pedagogy. This is evident, for instance, in process-based genre approaches (Badger & White, 2000), which call attention to the writing skills and strategies that go into developing a type of text. In addition, Johns (2008) has argued that to raise student genre awareness, instructors should focus on textual variation and different ways of knowing (epistemologies) that are embodied in different disciplinary communities. Finally, Hyland (2008) has called for a hybrid approach that involves not only explicit genre instruction, but also the incorporation of critical perspectives, consciousness raising activities about the rhetorical effects of linguistic constructions, and textual and well as contextual (i.e., systematic) analyses. It can be seen that, in part, these changes in perspective in genre pedagogy are reflected in the other changes to ESP genre theory reviewed above.

2.5 Summary

Swales' (1990) seminal work on genre has continued to play a predominate role in shaping how ESP genre researchers understand and analyze genres. As will be shown in Chapter 4, ESP

genre research has continued to use move analysis to analyze genres and discern their organizational structure. Swales' conception of discourse community has also continued to shape genre research, as many studies use academic disciplinary communities as a key notion for setting parameters on what texts will be studied. Nevertheless, the ESP genre tradition has undergone several changes and modifications in recent decades. Each of the other genre traditions reviewed above—the SFL tradition, the corpus tradition, and the rhetorical tradition—have influenced and helped to expand the ESP conception of genre as well as the analytical tools that ESP researchers use when examining genres. Some of the changes have also occurred in response to criticisms and shifts of focus. The major changes include (a) a greater emphasis on how social and contextual features shape genres, (b) more attention to the malleable nature of genres as well as factors that influence genre innovation, and (c) a diversification of genre pedagogies as well as the types of pedagogical impacts that are sought after, especially in regard to critical genre studies.

There are, however, remaining issues and challenges that need to be addressed by a theory of genre. First, if communicative purpose is to remain a defining characteristic of genres, more attention needs to be paid to the social v. cognitive distinction: is the purpose of a genre primarily understood in terms of the social effects that a genre has, or is it to be primarily understood as the cognitive act that one undertakes in producing the genre (whether to argue, to compare, to describe, etc.)? Second, if genres are categories of communicative events, this suggests that genres must be a part and parcel of the human ability to categorize. Turning to theoretical models in semantics may thus help to shed light upon the nature of genres as well as their defining features. Finally, with the emphasis on the rhetorical structure and moves in the ESP genre tradition, it has been somewhat surprising that little research has explored the affinities between speech act theory and moves, both being a functional analysis of language. In the following chapter, these issues will be addressed, and a theory of genre will be developed that is grounded in research in semantics.

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CHAPTER 3 : A COGNITIVE FRAMEWORK FOR UNDERSTANDING GENRE

As noted at the end of Chapter 2, there are several aspects of the ESP conceptualization of genre that could be further developed. This includes providing a more fine-grained analysis of communicative purpose, spelling out the relation between speech acts and rhetorical moves, and describing how genres relate more broader to the human ability to conceptualize and categorize. This chapter will address these issues by advancing a theory of genre grounded in theoretical semantics, in particular, in frame-based and script-based semantic theories (e.g., Barsalou, 1992; Croft & Cruse, 2004; Fillmore, 1976; Lakoff, 1987; Löbner, 2013; Raskin, 1985). The development of such a theory is motivated not just by the need to build a unified and complete theoretical model of how genres work from a cognitive perspective, but the theory will also provide a firmer foundation for move-analysis as a methodology, and it will help to guide researchers in making decisions about core aspects of genres that need to be investigated. Finally, following Paltridge (1997), grounding genre in such a framework will provide a more comprehensive model that can explain language comprehension and production.

The chapter will proceed as follows. First, I will provide a definition of genre that primarily draws upon theoretical constructs in semantics. The chapter will then unpack the key theoretical constructs that comprise the definition, including (a) *frame*, (b) *illocution* and *perlocution*, and (c) *prototypicality*, among others.

3.1 A Definition of Genre

From a cognitive standpoint—i.e., from the standpoint of how individuals identify, categorize, and construe individual texts as genres—genres can be defined in the following way:

> A genre can be represented as a **frame** for a complex communicative event. Genre frames are defined essentially in terms of their **communicative purpose**, which is a combination of **perlocutionary** and **illocutionary** aspects. Other notable aspects of genre frames include the audience, the medium and mode of production, and typical linguistic and discoursal features; however, these aspects show more variability than the genre's communicative purpose, accounting for **prototypicality effects** involved in text classification. Finally, the term 'genre' is often used for **basic level** categories; however, 'genre' is also often applied to more specialized or general categories of complex communicative events.

The remaining sections of this chapter will flesh out the bolded items.

3.2 Genre Frames

3.2.1 Why frames?

Before providing a precise definition of *frame*, it is helpful to begin by noting the work that frames are supposed to do in semantics and by juxtaposing some early characterizations of frames to get a general feel for different theoretical approaches.

In considering why frames are needed in semantics, let us first consider the general aim of semantics. Following Raskin (1985, p. 59), it is my contention that "the primary goal of any semantic theory is to model the semantic competence of the native speaker". This means that a theory of semantics should be able to account for the native speaker's semantic abilities, such as identifying ambiguity, making paraphrases, identifying semantically well-formed sentences, etc. Importantly, some of these abilities imply that a semantic theory must account for key *relations* that exist between concepts, which appear to be part of the semantic competence of native speakers. For instance, the sentence below is semantically anomalous:

1. That bachelor is a married man living in Indiana.

The key concepts in question in this case are BACHELOR, MARRIED, and MAN.[16] This particular example can be handled by what is sometimes called the "classical theory of categorization" (Taylor, 2003), which holds that concepts (i.e., semantic categories) are constituted by sets of necessary conditions which jointly determine sufficiency for category membership. In this case, one could argue the concept BACHELOR has at least two necessary features: UNMARRIED and MAN. Of course, much more ink would need to be spilt to fully account for this example (e.g., the concept HUMAN would also play a role, and some of the aforementioned concepts could be further analyzed); however, the takeaway point is that in the classical theory, the semantic explanation for the native speaker's intuition that such an example is anomalous can be accounted for by an *analytical* account of concepts, that is, concepts such as BACHELOR are just amalgams of other, more simple concepts. In the case above, applying the concept MARRIED

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[16]Following a common convention in the literature, I will use all caps talking about concepts.

to BACHELOR results in a contradiction since the concept BACHELOR contains the concept UNMARRIED. However, now consider the following sentence:

2. That bachelor is a 60-year-old priest.

Sentence (2) is also anomalous. Need this anomalousness also be explained by a semantic theory? There is good reason for thinking that it does; however, let us first attempt to lay out an argument that it does not. One might hold that we need to distinguish between what is sometimes referred to as *dictionary knowledge* and *encyclopedic knowledge* (Croft & Cruse, 2004). The former could be said to be purely linguistic knowledge, or meaning *per se* (Taylor, 2003). In other words, linguistic knowledge pertains to the necessary features that were identified in sentence (1) above. Encyclopedic knowledge, on the other hand, is knowledge that we gain from interacting with the world. In the case of bachelors, for instance, we may find out that they tend be young, that they tend to have studio apartments, that they tend have active night lives, etc. This knowledge is clearly associated with the concept of BACHELOR; however, under this interpretation, one would hold that it is not part of the actual meaning of the concept. After all, things could have been otherwise with our encyclopedic knowledge: It could have turned out that bachelors live in condos, that they tend to be old, and that they like to go to bed early. On the other hand, with dictionary knowledge, one cannot change the conceptual structure without changing the concept in question (i.e., changing one of the necessary conditions): A bachelor just isn't a bachelor if they aren't, say, unmarried.

This distinction can be further fleshed out by considering the *analytic-synthetic* distinction in philosophy. So the story goes, analytic propositions are those that are true in virtue of meaning alone, while synthetic propositions are those that are true in virtue of being tested against the world. For example, consider (3) and (4):

3. All bachelors are unmarried men.
4. Most bachelors like pizza.

The proposition in (3) is held to be true as a result of meaning alone, which as we saw above, can be explained by the fact that the concept BACHELOR seems to contain the concepts

UNMARRIED and MALE. Importantly, one would not need to consult the world to know that (3) is true since, in a certain respect, this just is conceptual knowledge (or dictionary knowledge). On the other hand, even if (4) is true, this is not something that we can determine via consulting the meanings of the parts of the sentence. There is no necessary connection between BACHELOR, PIZZA, and LIKE. Rather, we have to go and look in the world to see whether things are this way. Likewise, one could argue that the anomalousness of sentence (2) (about a priest being a bachelor) boils down to the knowledge that we've gleaned from the world. Thus, it would not be a matter a meaning *per se*.

There are strong arguments, however, for thinking that this dictionary approach will fail to do the work that is required of it. Most outstanding, the view appears to be overly restrictive in how it demarcates meaning, and thus it cannot fully account for the semantic competence of native speakers. Consider, for example, a new set of sentences borrowed from Taylor (2003):

5. Dogs are animals
6. Dogs have four legs, have a tail, bark, etc.

As Taylor points out, unless the dictionary definition of DOG were to expand to become quite robust, the attributes listed in (6) (as well as others associated with dogs, such as having fur and engaging in tail-wagging) will need to be relegated to encyclopedic knowledge. Indeed, based on the demarcation above, there is good reason for thinking that such features properly belong to encyclopedic knowledge, since sentences formed using these attributes would appear to be *synthetic* and not *analytic*. For example, consider 7:

7. Most dogs have tails.

This clearly cannot be known simply by consulting the meaning of DOG: One must go out and look in the world; however, this raises two potential concerns. First, one might think that such features as 'having a tail', 'barking', and 'having four legs' *are* crucial elements to understanding the meaning of dog. If we bar the meaning of DOG from containing all such attributes and only leave a condition such as 'is an animal' as in example (5), one might well wonder whether meaning has been stripped of the flesh it needs to account for a native speaker's semantic competence.

Perhaps an even stronger argument is that even sentences such as (5) might not be as purely analytic as one might think:

> Suppose that, as a consequence of scientific discoveries, our understanding of life forms were to undergo radical change, resulting in a major re-classification of biological kinds. In case this should seem a rather far-fetched idea, bear in mind that restructuring of natural kind categories has occurred in the past. It is only in comparatively recent times that modern theories of the chemical elements replaced the older idea that the universe was made up exclusively out of the four elements, earth, air, fire, and water. It is therefore not inconceivable that a restructuring of biological kinds might occur in the future. One consequence might be a new understanding of the category ANIMAL (Taylor, 2003, p. 86)

Such being the case, even what might seem like an analytic statement appears to involve encyclopedic knowledge. The same point can be raised for BACHELOR: How is it that we uphold a clear demarcation between the dictionary and encyclopedic aspects of our knowledge of this concept? After all, it would seem that the core features that comprise the concept BACHELOR—MAN and MARRIED—are not immune from conceptual revision based upon experience and scientific discoveries. Marriage, for instance, has been a constantly evolving social practice. Thus, to apply this feature to an entity in the world is not a matter of having purely conceptual knowledge but involves encyclopedic knowledge that grows out of one's social and historical context.

Another issue with the dictionary approach is that it places undue emphasis upon what might be termed "internal" conceptual linkages or "part-features"—i.e., relations between the concept and the essential sub-concepts that it is composed of (e.g., BACHELOR is composed of the part-features MARRIED and MAN). It would also seem that a semantic theory needs to account for "external" linkages—i.e., relations to concepts that lie outside of its essential part-features. Croft and Cruse (2004), for example, note that the meaning of the concept SCAR is not just a certain feature of one's skin: it also links to the concept of WOUND. In other words, to understand the meaning of SCAR, one must grasp a connection to an event leading up to and causing the SCAR. Likewise, to borrow an example from Fillmore and Atkins (1992), consider the concept WEEK: Internal conceptual relations might include the weekdays (MONDAY, TUESDAY, etc.) as well as the concept CYCLE; however, one would also need to take into account a broader network of concepts to fully account for the meaning of this term, including concepts such as MONTH and YEAR, which are not internal features of WEEK.

To account for this broader network of conceptual relations can be a challenge for any semantic theory, for this involves accounting for features such as presupposition and entailment. Consider, for example, Lakoff's (1987) contrast between the concepts STINGY and THRIFTY. As Lakoff notes, both concepts might be defined as 'spending little money'. The internal part-feature analysis would thus hold that this concept involves sub-concepts such as SPEND, MONEY, and LITTLE; however, this definition alone cannot account for the native speaker's semantic understanding of STINGY and THRIFTY, for (8) is a semantically acceptable sentence:

8. Joe isn't thrifty; he's stingy.

If the semantic content of STINGY and THRIFTY could simply be translated as 'spending little money', then the sentence would obviously be contradictory, as it is in its translation into (9):

9. Joe doesn't spend little money; he spends little money.

A semantic account of (8) would thus need to note that STINGY and THRIFTY have different presuppositions (or background conditions): Whereas STINGY presupposes that spending little money is a bad thing, THRIFTY presupposes that spending little money is a good thing. The goodness or badness of spending little money points to a broader conceptual network that is needed to account for the native speaker's semantic competence in using this concept.

3.2.2 What are Frames?

There are certainly additional semantic and conceptual relations that need to be captured in a semantic theory in addition to those discussed above; however, what I hope is clear from the discussion thus far is that any semantic theory will need to be quite robust in order to handle all such relations. Over the past decades, there have been several promising approaches to semantics that have aimed to address such issues. These approaches go by different names. Most prominently, they are referred to as "frames"; however, "scripts", "scenarios", and "schema" are other names that have occurred in the literature (Löbner, 2013). This is not to suggest these theories are in any

way synonymous; however, they have enough in common that I will discuss them as a group.[17] I should also note that, for convenience, I will refer generally to this group of related theories as "frame-based semantic theories" or just "frames" for short. Below I will sketch what a frame-based theory looks like.

Frames can be understood as "ready-made complex chunks of knowledge" that are used to interpret and understand our experience (Löbner, 2013, p. 301). In essence, then, frames just are categories or concepts, and, similar to classical categories (at least under one interpretation of classical categories), they can be understood as cognitive structures (i.e., "chunks of knowledge") that we use to classify and give structure to our experience. What makes frame-based semantic theories distinct is that they typically (a) do not draw a hard distinction between encyclopedic and dictionary knowledge (which leads to the inclusion of much of what would have been relegated to encyclopedic knowledge) and (b) part of the frame includes what is sometimes referred to as a *semantic domain* or a *base* (which could loosely be said to be background knowledge). These two factors explain why the "chunks of knowledge" in frames tend to be larger than what is typically fleshed out in classical theories of categories. Furthermore, as we shall see below, frames can also account for prototypicality effects that have been observed in human categorization.

That frames are large chunks of knowledge that include encyclopedic knowledge is exemplified in the frame-based semantic theories advanced by Charles Fillmore (1976) and Victor Raskin (1985). Fillmore (1976) has the following to say about frames:

> Every memorable experience occurs in a meaningful context and is memorable precisely because the experiencer has some cognitive schema or frame for interpreting it. This frame identifies the experience as a type and gives structure and coherence—in short, meaning—to the points and relationships, the objects and events, within the experience. (Fillmore, 1976, p. 26)

This conceptualization highlights the importance of capturing the *relations* between objects and events within a frame in order to provide an explanation for how we are able to catalogue experiences in our memory. Such relations often fall more on the side of what previously would have been termed "encyclopedic knowledge" rather than "dictionary knowledge", since the latter tends to depict concepts only in terms of the internal features of objects or in terms of a limited range of relations for events. That frames cast a wider net can be seen, for instance, in Fillmore's description of a frame for a commercial event, which can be referred to by the English word "buy".

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[17]Tannen (1993) provides a concise overview of some of these early accounts and their nuances.

This frame contains key players and key objects, such as BUYER, SELLER, GOODS, and MONEY, and it would also contain key subevents and relations between the key objects, such as (a) the BUYER providing MONEY to the SELLER and (b) the SELLER providing the GOODS to the BUYER. In other words, this cognitive structure contains all of this information, and we activate the structure whenever we use the word "buy" or simply whenever we encounter a scenario that would aptly be referred to by this term.

A more robust frame analysis can be found in Fillmore and Atkins' (1992) treatment of RISK, which also highlights the importance of including what previously would have been called "encyclopedic knowledge". The authors argue that, contained within this frame, are the following frame elements:

a) CHANCE (the possibility of harm or danger inherent when one takes a risk),

b) HARM (an unwanted future event that could occur to the agent in the risky situation),

c) VICTIM (the recipient of the harm),

d) VALUED OBJECT (the thing being risked, as in "he risked his life driving home that night"),

e) SITUATION (a circumstance that involves risk),

f) DEED (an act that brings about a risky situation),

g) ACTOR (the agent that performs the DEED),

h) GAIN (what the ACTOR gains in taking the risk),

i) BENEFICIARY (another person for whom a risk is taken),

j) MOTIVATION (the agent's motive for taking the risk).

This isn't to say that any and all particular situations involving risk must activate all the frame elements. For instance, the authors distinguish between risk-running (when one is in a risky SITUATION that could result in harm) v. risk-taking (when there is a DEED that brings about a risky SITUATION). However, regardless of whether a particular risky circumstance involves all the frame elements, the argument being advanced is that all these frame elements are what comprise the conceptual structure of RISK. That native speakers can apply the concept RISK to various experiences in their lives that can be characterized by such frame elements indicates that the conceptual account of RISK must contain these elements. As Fillmore would argue, the moment we identify and catalogue an event as involving RISK, the experience is given coherence

and structure in that competent language users immediately know that RISK involves CHANCE, HARM, VICTIM, etc. This frame is clearly a large chunk of knowledge.

Raskin's (1985) conceptualization of a *script* is quite similar to Fillmore's *frame*, and it also highlights that these cognitive structures contain a robust amount of knowledge, some of which is encyclopedic in nature:

> The script is a large chunk of semantic information surrounding the word or evoked by it. The script is a cognitive structure internalized by the native speaker and it represents the native speaker's knowledge of a small part of the world. Every speaker has internalized rather a large repertoire of scripts of "common sense" which represent his/her knowledge of certain routines, standard procedures, basic situations, etc., for instance, the knowledge of what people do in certain situations, how they do it, in what order, etc. (Raskin, 1985).

If a frame (or script) contains knowledge of what people do, how they do it, and in what order, then the frame certainly captures knowledge that can only be described as having been formed by interacting with the world (i.e., encyclopedic). This is evident in Raskin's explanation of verbal humor, which he argues involves script opposition, i.e., at least two scripts are (semi)-compatible for a given joke, but the scripts can be characterized as having an oppositeness to one another. For example, Raskin argues that the following joke evokes and is compatible with two scripts in this 'opposite' relation to one another:

> 'Is the doctor at home' the patient asked in his bronchial whisper. 'No', the doctor's young and pretty wife whispered in reply. 'Come right in' (Raskin, 1985).

The two scripts in this case could be referred to as a "doctor-patient script" and an "affair script". The example shows that the chunk of knowledge associated with doctor-patient scenarios extends so far as to include knowledge about how events typically unfold. In the joke, this "structure of expectation"—as Tannen (1993, p. 138) would put it—must include knowledge, or the expectation, that patients do not enter their doctor's office (or home) unless the doctor is present somewhere at the location, which is clearly more closely linked to encyclopedic than dictionary knowledge.

As Taylor (2003) points out, however, the breakdown of the distinction between encyclopedic knowledge and dictionary knowledge could potentially raise a demarcation problem, for not every piece of knowledge about a kind of object or event seems relevant to our conceptualization of the object or event. However, Taylor (2003) emphasizes that "[t]o say that

the dictionary is encylopaedic is not equivalent to saying the dictionary *is* an encylopaedia" (p. 86). In other words, our definitions of concepts, while they must include knowledge we have gained from interacting with the world, are not simply a summary of everything we've learned about a type of thing: Only certain aspects of our knowledge are relevant for the definition. If we then understand conceptual definitions within a frame-based semantic theory, this would mean that, while frames do not draw a hard-and-fast distinction between encyclopedic knowledge and dictionary knowledge, this does not imply that a frame is tantamount to all of our encyclopedic knowledge of the subject in question: it is more limited, and such borders can be delimited by the concept of a *semantic domain* or *base*.

As Croft and Cruse (2004, p. 15) note, a base is "that knowledge or conceptual structure that is presupposed by the profiled concept". In other words, a frame involves a profiling of some specific aspect of a larger base or domain (Taylor, 2003). For example, Croft and Cruse ask us to consider the concept RADIUS. As the authors note, defining a radius as a "line segment" would be an insufficient definition due to the fact that RADIUS presupposes the domain CIRCLE as a background against which RADIUS is profiled. Thus, in the frame for RADIUS, one must include this base to understand the concept. It is also notable that multiple profiles can emerge from the same domain. In the example above, for instance, DIAMETER, CIRCUMFERENCE, and ARC are all also profiled against CIRCLE. Thus, the domain sets the parameters for just how large the "chunk of knowledge" of a frame can be.

Including this notion of a domain within a frame can help to address some of the problematic cases reviewed above, such as the case of WEEK as well as the contrast between STINGY and FRUGAL. In the case of WEEK, this concept can serve as both a thing profiled as well as a domain against which other concepts are profiled. MONDAY, for instance, is profiled against WEEK, while YEAR is a domain for profiling WEEK. Furthermore, in the case of STINGY, the ascetic money-spender is profiled against a base where spending little amounts of money is a miserly thing to do, whereas with FRUGAL, the money-spender is profiled against a base where spending little amounts of money shows prudent care and thought.

Thus, in summary, a frame is a large chunk of knowledge that corresponds to kinds or types of things and events that we experience and find memorable. Frames tend to be much more robust than dictionary-type definitions of concepts, in large part because they do not draw a strict distinction between dictionary and encyclopedic knowledge. Finally, frames can be understood as

profiling a figure against a broader base or domain. In the section that follows, I will provide a more detailed description of what kind of information is included in an individual frame as well as a model for how frames are nested and connected to one another.

3.2.3 The Format of Frames

3.2.3.1 Frames as Attribute-Value Sets

Following Barsalou (1992), I will understand the core components of frames as being attribute-value sets. Attributes can be understood as "a concept that describes an aspect of at least some category members" (Barsalou, 1992, p. 30). In other words, an attribute is a "parameter of description" of a frame (Löbner, 2013), or, put differently, an element of a frame. It should be emphasized that attributes do not necessarily have to be present in all particular instances to be part of the frame, which allows frames to be consistent with prototypicality effects (discussed below). Values, on the other hand, are the "subordinate concepts of an attribute" (Barsalou, 1992, p. 31). That is to say, values are the possible kinds of things that an attribute can be instantiated as. An example will clarify. The frame for an event such as DIRECT (where someone gives an order to someone else to do something) would contain at minimum the following attributes:

- AGENT[18]: The one doing the directing.
- PATIENT: The one given the directions.
- THEME: What it is that the agent wants to have happen.

The values for such a frame—the "subordinate concepts"—are not fixed: For example, the AGENT attribute could have values such as 'human', 'police officer', 'teacher', 'parent', etc. However, despite this wide range of flexibility, the values are constrained. The constraints can be understood as default concepts that native speakers *expect* the attributes to take. The defaults change based upon how much contextual information is given. For example, consider (8):

8. Someone directed someone else to stop moving.

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[18]Following Löbner (2013), I will use small all-caps to indicate an attribute for a frame.

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This example is relatively decontextualized and, therefore, is a candidate for capturing the underlying structure for the concept DIRECT. Clearly, we cannot say that we expect the attribute to take a value such as 'police officer' or 'parent'; however, despite being decontextualized, it would appear that the default for AGENT will be 'human' as will the default for PATIENT.

At this juncture, it is fitting to address a potentially misleading and confusing issue that has arisen: when talking about values in abstract, decontextualized examples and values in highly concrete, contextualized examples, it seems we are talking about different things. For example, in a concrete example, the AGENT attribute could take a specific person for a value, as in 9.

9. John directed Joe to stop moving.

To make it clear that sometimes the frame is capturing a generalization about expectations (and thus takes a concept for a value) while at other times it is capturing a specific entity in a concrete situation (and thus takes an individual for a value), I will follow Nirenburg and Raskin's (2004) terminology instead of Barsalou (1992): The authors use the term "filler" instead of "value", and they use the term "facet" to refer to the different kinds of filler that an attribute can take. For example, among others, the authors distinguish between (a) *value-facets*, which take specific instances or numbers as their fillers (e.g., "John" and "Joe" are fillers for a value-facet in the example above); (b) *Sem-facets*, which take concepts for fillers (e.g., "human" is a filler for a sem-facet in the AGENT attribute); and (c) *default-facets*, which are expected concepts that will be fillers. For this last case, the defaults will always be subordinate concepts to the sem-facet (i.e., more specific concepts). For example, the PATIENT attribute may have a default filler of "human"; however, the filler of the sem-facet should arguably be broader, since one can give directions to other organisms, such as dogs, dolphins, etc. Thus, the sem-facet might be represented as having a value of "intelligent living thing", or something of that nature.

This highly simplified frame for DIRECT in a maximally decontextualized context is shown below.

DIRECT		
Attribute	Facet	Filler
AGENT	default	human
PATIENT	default	human
THEME	sem	event

Figure 3.1. Frame for DIRECT

As we move from maximally decontextualized cases to more highly contextualized ones, a curious thing happens: the expected fillers change (i.e., the defaults). For example, if we suppose that in some alternative culture, Scott is a typical name for a dog and not for a human, then "human" would not be the expected value for this frame attribute, even if the text left it uncertain as to whether the name referred to a dog or a human. Thus, while it is arguable that concepts have an underlying frame structure that is relatively stable in highly decontextualized cases, in real-life contexts a frame theory should have a way of accounting for the shifting default fillers. In other words, in contexts of use, there needs to be a way of updating the expected fillers of frame parameters.

To address this issue, I turn to Croft and Cruse (2004), who account for such flexibility in frames by proposing an approach to conceptualization referred to as *dynamic construal*. Roughly, the idea is that the underlying conceptual structure of a frame is not static and fixed, but is actively created from past experiences, recent experiences, and the current experience. For example, consider (9), (10), and (11) below (which have been modified and adapted from Croft and Cruse).

10. He can fly like a bird.
11. Look at all the birds in the zoo.
12. The bird dove into the water.

In each case, the default fillers for the frame (even with no additional context) seem to change. Arguably, this is because *some* context has been provided, in the respect that the concept BIRD is linked with other concepts in each case, most notably FLY, ZOO, and WATER. Thus, in (10), for example, regarding BIRD attributes such as SIZE, SHAPE, and ABILIITES, the default values would certainly bar a flightless bird such as a penguin or an ostrich, while in (11), this would not be the case. In (12), the expected fillers also create a restricted frame, in that the fillers need to be consistent with birds that, based on our previous experiences, do water-diving. That

such default frame elements are created "on-the-fly", as it were, can be seen in (13), (14), and (15), which provide additional context.

13a. That thing can fly like a bird—just like a hawk.
13b. That thing can fly like a bird—just like a chicken.
14a. Look at all the birds in the zoo. Over there is a penguin.
14b. Look at all the birds in the zoo. Over there is a chicken.
15a. The bird dove into the water. Up comes the heron with a fish in its beak.
15b. The bird dove into the water. Up comes the goldfinch with a fish in its beak.

In the (a) examples, the sentences are not anomalous, while the (b) examples are odd. The best explanation for the oddity is that the expected frame fillers vary in each case depending on how the concept being construed (i.e., BIRD) interacts with other concepts, which largely depends on the three factors noted above: past experiences, recent experiences, and the current experience. In the case of (13), for example, the default filler for ABILIITES must include the ability to fly, and based on our previous experiences, we expect the filler to take a bird that can fly well. While a chicken can fly, its poor ability to do so creates an incongruency with the default filler for the frame. In (15), on the other hand, given our previous experiences with the kinds of birds that dive into water, the fillers for the SIZE and SHAPE attributes are not construed in a way that is consistent with goldfinches: we probably expect a bird with a larger wingspan and a longer beak. Again, however, it is certainly *possible* that a small, tiny bird could dive into the water and catch a fish: The point is that there has to be some way of accounting for our shifting expectations.

While dynamic construal certainly can explain some of the flexibility needed in frames, I would not be willing to go so far as to say that there are no underlying conceptual structures and that, instead, concepts are always dynamically construed on the spot from our knowledge and memories. In fact, such a view seems inherently at odds with frame semantics since frames just are the conceptual tools that make our knowledge and memories possible to begin with (recall Fillmore's definition of a frame above). Thus, I think a sort of 'in-between' view, as it were, can both account for the dynamism we observe in real life contexts as well as the seemingly stable structures that reoccur with every instance of a concept. Such a view would hold that there is a highly abstract, bare-bones frame that underlies all particular instances of a category. This structure

is relatively stable and invariant. However, at the same time, depending on the context, this base model is used to construe additional aspects of frames that have updated expectations for frame fillers. This updating continues as more and more context is added. We will leave the issue here, however, for regardless of whether one wants to posit such deep invariant structures, the basic format of the frame would look the same.

3.2.3.2 Ontological Semantics

While Barsalou's (1992) concept of frames along with Croft and Cruse's (2004) notion of dynamic construal provide a way of understanding the internal workings of a frame, they do not provide a robust account of how frames are organized into a broader conceptual network. This will be important for genre studies, as much ink has been spilt over the best ways of taxonomizing and classifying genres (e.g., Esser, 2014; Gardner & Nesi, 2013; Virtanen, 1992), a topic which we explore in some detail near the end of this chapter. To develop such relations between genres as well as relations between internal features of genres, I will draw upon a theory known as *ontological semantics*, a semantic theory of natural language processing developed by Sergei Nirenburg and Victor Raskin (2004). The centerpiece of the theory is an *ontology*, also known as a constructed world model. The ontology is a representation of a language user's knowledge about (a) types of things (objects) and processes (events) in the world as well as (b) the relations between attributes of things and processes. Broadly speaking, all of the elements in the ontology (the properties, objects, and events) can be understood as an interconnected web of *frames*. The format for representing these individual objects and events has already been partially reviewed above.

Of interest here, Nirenburg and Raskin's (2004) model allows for a robust account of frame relations and frame nesting (i.e., including one frame within another and linking frames to one another). The key device that allows for such relations is the frame-linking concept they refer to as *IS-A* (as in "a dog **is a** mammal"). Whenever two frames are related by IS-A, there is a parent-to-child relation. The child frame can be thought of as a sub-set or a sub-category of some broader frame (the parent frame). For example, in the case of DIRECT, a broader parent frame would be SPEECH ACT. On the other hand, moving down the ontological chain to more specific categories, DIRECT would have several children, including COMMAND, PRAY, and ASK (if we construe DIRECT in a broad sense). A representation of the relationships between these frames is given

below in Figure 3.1, based in part upon John Searle's (1976) "A Classification of Illocutionary Acts".
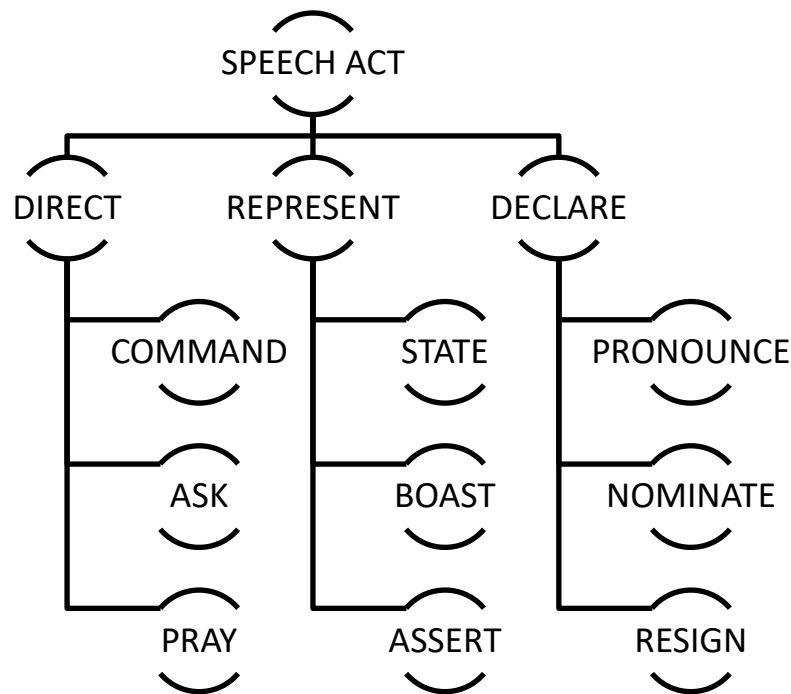
Figure 3.2. Relation among types of speech acts in an ontology

Importantly, child concepts inherit frame attributes from their parents. Thus, COMMAND, PRAY, and ASK would all minimally contain the AGENT, PATIENT, and THEME attributes identified in DIRECT above. However, children need not always inherit every frame element, and sometimes they will have additional attributes and/or more restricted fillers. For instance, while the default PATIENT attribute of DIRECT (in a decontextualized case) takes as its filler "human", in the case of PRAY, the default PATIENT attribute would take some kind of "deity" as its filler. Similarly, in the case of COMMAND, the default for the AGENT attribute will be more restricted than in DIRECT, since the expectation will be that the issuer of the command occupies some kind of institutionalized authority in relation to the PATIENT.

To further illustrate this process of inheritance, let us consider the example COMMAND in more detail. Following Searle and Vanderveken (1985), some of the core attributes of speech acts include the following:

- **The mode of achievement** - whether the speech act needs to be carried out in a specific or approved manner, e.g., giving a verdict depends upon a specific institutional arrangement in the court system (a private citizen cannot issue a verdict without using this proper channel)
- **Preparatory conditions** - whether there are special conditions or presuppositions that need to obtain for the speech act to be successful, e.g., making a request requires that the speaker thinks it possible that the hearer can carry out the request.
- **The psychological state of the speaker** - the specific mental attitude the speaker needs to be in for the speech act to be successful, e.g., a state of desire, belief, or intent.

Some of these attributes can be viewed as sub-attributes of those already identified above. For instance, PSYCHOLOGICAL STATE is an attribute of a human agent. In the case of COMMAND, the PSYCHOLOGICAL STATE of the agent has to take as its filler "desire": that is, one cannot properly and in a *bone fide* way issue a command without, in some sense, desiring (or wanting) that the PATIENT carry out the order. This specific frame parameter is actually inherited from the parent: All child-frames of DIRECT involve the AGENT having such as mental state. In addition, in terms of the mode of achievement, both the AGENT and PATIENT need to occupy certain roles within the right kind of institution for a command to be issued. If, for example, a private tells a sergeant to "drop and give me 50", it simply will not be a command. Finally, regarding preparatory conditions, issuing a COMMAND relies on the default presupposition that the AGENT believes the PATIENT has the ability to carry out the request. Although one can issue a command where this default condition does not hold, it leads to anomalous sentences, such as (16).

16. Although he knew Moe was paralyzed, John commanded him to get up and turn the TV on.

In the frame below, we will refer to these sub-attributes of AGENT and PATIENT as *MENTAL STATE*, *RANK*, and *PREPARATORY CONDITION* (sub-attributes are marked by italics). The AGENT has the *MENTAL STATE* filler of "desire"; the AGENT will have a *RANK* filler of "superior" while the PATIENT filler will be "subordinate"; and the *PREPARATORY CONDITION* filler is the THEME of the speech act (i.e., the event that is to take place). This more fleshed out COMMAND frame is shown below (sub-attributes are italicized).

COMMAND		
Ontological Relation		
IS-A		DIRECT (SPEECH ACT)
Attribute	Facet	Filler
AGENT	default	human
RANK	default	superior
MENTAL STATE	sem	desire
PREPARATORY CONDITION	default	belief that PATIENT can THEME filler
THEME	default	event
PATIENT	default	human
RANK	default	subordinate
PREPARATORY CONDITION	default	can do THEME filler

Figure 3.3. Frame for COMMAND

To wrap up, a few points should be highlighted. First of all, to emphasize the point once again, frames contain large chunks of semantic knowledge. In the COMMAND frame above, for instance, even more detail should be added. Furthermore, it can be seen that frames contain relational links to other concepts in the ontology, both through their attributes and fillers as well as through the ontological superordinate relation (IS-A). This ends up creating a web of interconnected frames (i.e., the 'ontology'). Second, the framework developed thus far might be challenged on grounds that (a) the frame elements are too invariant and (b) the frames are conceptualized as being universal for a group of language users. In regard to the former concern, while frames do occasionally have invariant elements (e.g., BACHELOR has the largely invariant feature UNMARRIED), the facet 'default' aims to allow for more flexibility. In other words, that a particular filler is a default for a frame attribute has the virtue of explaining our *expectation*, while it also allows for wiggle room in that, just because a filler is a default, this does not imply that it *must be* present in the frame. Regarding the latter concern, I can only make a few cursory remarks: While frames must vary in certain respects across language users, it would seem that, by and large, there has to be a large degree of homogeneity, for what else could explain our mutual understanding of concepts when we use language? When, for instance, Fillmore and Atkins (1992) analyze the RISK frame, I take the elements that they discern to be relatively uncontroversial for native speakers of English. Still, one might fairly wonder whether 'arm-chair' analyses of frames merely capture the frame structure for the *author* and not for the general population. I will leave it to the reader to be the judge as to whether some of the analyses in this work capture idiosyncratic frame structures or those that might be fairly posited of the broader population. In addition, there

is the possibility of empirically testing one's frame analysis. For instance, investigating how linguists conceptualize text types, Tincheva (2017) had participants complete a survey, part of which had them answer questions relating to key parameters that they believe define the notion of 'text type'.

3.2.4 The Format of Genre Frames

We are now in a position to apply the framework developed above to genres. This section will begin with an overview and brief description of the some of the key frame attributes of genres. Next, I will review two genre frame models that have been put forth by Paltridge (1997) and Sinding (2016) to further flesh out key frame components and to contrast these models with my own. Finally, I will put forth my own model, developed for the PHILOSOPHICAL RESEARCH ARTICLE, the genre investigated in this dissertation.

The most important element of the genre frame is the communicative purpose of the genre. The emphasis on communicative purpose is supported by the discussion in the previous chapter, where we saw that some of the leading conceptualizations of genre, including Swales' (1990; 2004) theoretical framework in the ESP tradition as well as Miller's (1984) and Bazerman's (2012) in rhetorical genre studies, focus on communicative purpose as the defining feature of genres. Translated into frame-semantics language, a genre frame contains a COMMUNICATIVE PURPOSE attribute that has a relatively invariant filler. As noted in my definition of genre above, however, there is a nuance in communicative purpose that will be fleshed out below: there is both an illocutionary force that characterizes each genre—i.e., a cognitive activity that describes what the genre user is doing—as well as a default perlocutionary aim, which is the intended social impact the genre user aims to have in the social environment (which is indicated by the choice of words preferred by rhetorical genre scholars—"social action").

The other genre frame elements have fillers that are less fixed and more variant than COMMUNICATIVE PURPOSE. In other words, while such attributes may have default fillers, a deviation from the defaults in a specific text will not necessarily preclude the genre frame from being applied to that text (on the other hand, a change in the filler for the COMMUNICATIVE PURPOSE *would* lead to such a preclusion). These other key attributes can be characterized as falling into two broad groups, which correspond to the base (or semantic domain) and figure (or profile) of a frame (Croft & Cruse, 2004; Taylor, 2003): (a) situational attributions (i.e., contextual

factors) and (b) discourse attributes (i.e., textual factors). Regarding the former, the most salient situational attributes are the factors identified by Biber and Conrad (2009): AUDIENCE, AUTHOR, CHANNEL, PRODUCTION CIRCUMSTANCES, SETTING, etc.[19] COMMUNICATIVE PURPOSE in part can also be characterized as a situational attribute; however, as noted above, this concept is in need of further analysis. Furthermore, because it is an essential defining attribute, COMMUNICATIVE PURPOSE will be given a special place in the genre frame. Regarding the latter, discourse attributes include factors such as (a) the macro-structure of the discourse, (b) the typical speech acts and speech act sequences in various parts of the larger structure, i.e., the "move structure" discussed in ESP genre studies (Bhatia, 1993; Swales, 1990), (c) grammatical and lexical properties distinctive of the genre (e.g., whether the genre has a formal or informal style), and (d) topics typically addressed in the discourse (these factors will be more formally developed below).

This division of genre attributes is largely consistent with both Paltridge's (1997) and Sinding's (2016) genre frame models, which are worth summarizing to further describe the attributes typically posited in a genre frame and to contrast these models with the one developed in Figure 3.4 below. Drawing upon Fillmore's (1976) framework, Paltridge distinguishes between *interactional* and *cognitive* genre sub-frames. The former refers to the "distinguishable contexts of interaction in which speakers of a language can expect to find themselves" (Fillmore, 1976, p. 25). The frame elements of these "contexts of interaction" almost completely overlap with those identified above as situational attributes, e.g., the AUDIENCE, AUTHOR, CHANNEL, PRODUCTION CIRCUMSTANCES, SETTING, FUNCTION (i.e., COMMUNICATIVE PURPOSE), etc.; however, Paltridge includes TOPIC as an interactional element, which I would argue more fittingly belongs to the discourse sub-frame. As an example of the fillers these attributes can take, Toledo (2005), drawing upon Paltridge's framework, characterizes the interactional frame of the genre BOOK ADVERTISEMENT in the following way: AUTHOR – 'publisher'; AUDIENCE – 'workers and scholars in library sciences'; CHANNEL – 'written'; etc.

The notion of cognitive frames, on the other hand, refers to the "semantic domains which relate to particular communicative events" (Paltridge, 1997, p. 50). According to Paltridge, a cognitive frame for a genre contains features such as the *scenario* associated with the genre, the *roles* of the major players in the scenario, and *discourse features* (examples given below). Before

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[19]I've changed some of the names of the situational attributes (e.g., rather than "participants", "speaker", and "hearer", I've chosen to use "audience" and "author"). For a review of these factors, see Table 2.1 in Chapter 2.

looking at the cognitive frame for a genre, however, it is helpful to first look at a simpler case. Fillmore (1976) gives the example of a commercial transaction frame (examined above) as a cognitive frame. Recall that there are certain roles and typical scenarios that play out in this frame: the BUYER gives MONEY to the SELLER; then the SELLER gives GOODS to the BUYER, etc. These roles and scenarios are all part of the semantic domain related to the event. Applied to genres, the cognitive frame contains the scenario(s) associated with what happens in the text. Paltridge (1997), for example, notes that in a scientific report, the scenario would be 'an experiment looking into the effects of [x] on subject(s) [y] and [z]'. As the text plays out, there are also several ways of describing different discourse features. Paltridge includes DISCOURSE ELEMENTS (similar to Swales' notion of *moves*), DISCOURSE ELEMENT COMPONENTS (similar to Swales' notion of *steps*), SEMANTIC RELATIONS (how propositions in a discourse a related), and ASSOCIATED WORDS (for example, technical terminology). Drawing once again on Toledo's (2005) BOOK ADVERTISEMENT analysis as an example, DISCOURSE ELEMENTS include 'the solution the book offers' and 'the problem it addresses'; DISCOURSE ELEMENT COMPONENTS include 'a general presentation of the solution', 'a description of the solution', and 'an evaluation of the solution' (for the 'solution' element); and SEMANTIC RELATIONS include, among others, 'means-purpose' (one statement describes an action and the other describes the reason behind the action).

However, this characterization of a cognitive frame raises a potential concern with Paltridge's model: the distinction between the interactional and cognitive frame is not always clearly motivated. As Sinding (2016) notes "questions remain about how the two kinds of frames (and their parts) are related, and why the discourse factors are distributed between the frames as they are" (p. 322). In Fillmore's (1976) original distinction, for instance, the interactional frame seems to contain discourse moves rather than the cognitive frame, which can be seen in the passage below.

> One simple example [of an interactional frame] is the greeting frame. In some languages a greeting frame specifies that the socially superior initiate the greeting, in some it is the socially inferior, while in others the initiator role is unassigned or is based on other considerations; in all languages the form of a greeting is determined from a restricted inventory of topics and expressions, many of these dependent on highly specific contextual conditions. (Fillmore, 1976, p. 25)

As can be seen, this interactional frame contains the discourse move of who initiates the greeting, and presumably it would also contain other moves, such as how the other appropriately responds to the greeting.

Sinding's (2016) triple frame model attempts to address some of these shortcomings by positing three frames, each nested within the other. At the highest level is a *sociocognitive action frame*, whose core components include the COMMUNICATIVE PURPOSE and the INSTITUTIONAL SETTING for the genre. Next is *the rhetorical situation frame*, which contains the contextual (interactional) frame elements previously reviewed (AUDIENCE, AUTHOR, CHANNEL, PRODUCTION CIRCUMSTANCES, etc.). Last is the *discourse structure frame*, which contains RHETORICAL MOVES AND STEPS as well as the STYLE OF SPEECH (formal or informal). As Sinding notes, the frames are related in that the core communicative purpose of the sociocognitive frame is performed within a rhetorical situation frame, which contains the specific language sequences used by the author. Still, Sinding's model has its own shortcomings. In particular, it does not appear to contain any indication of the genre user's expectations regarding topics associated with the genre. In addition, one might wonder if further elements need to be identified. For instance, following Tardy (2009), one could draw upon her quadripartite genre model to argue that there are additional frame attributes that have seldom been mentioned in the literature, particularly those associated with process knowledge (such as the composing and publishing processes that went into creating the genre).

The model I develop below incorporates and expands upon Paltridge's (1997) and Sinding's (2016) genre frame models by (a) utilizing the genre frame format developed in section 3.2.3 above (Barsalou, 1992; Nirenburg & Raskin, 2004) and (b) using Croft and Cruse's (2004) notion of a semantic base and profile to distinguish between the genre sub-frames.

PHILOSOPHICAL RESEARCH ARTICLE		
Ontological Relation		
IS-A		RESEARCH ARTICLE
Attribute	**Facet**	**Filler**
Essential Attributes		
COMMUNICATIVE PURPOSE	sem	(see illocution and perlocution)
ILLOCUTION	sem	argue
PERLOCUTION	sem	solve philosophical problem
Situational Attributes (Semantic Base)		
AUTHOR	default	philosopher
OCCUPATION	default	higher education
AUDIENCE RELATION	default	colleague
AUDIENCE	default	philosopher
AUTHOR RELATION	default	colleague
EXIGENCE	default	philosophical problem
CHANNEL	default	(see mode and medium)
MODE	default	writing
MEDIUM	default	electronic
PRODUCTION CIRCUMSTANCES	default	planned and edited
CONTENT DEVELOPMENT PROCESS	default	conferences; literature review
PUBLICATION PROCESS	default	peer-reviewed
SETTING	default	(see time and place)
TIME	default	asynchronous
PLACE	default	situation-independent
Discourse Attributes (Figure)		
MACRO-STRUCTURE	default	intro-problem-solution-conclusion
DISCOURSE MOVES	default	(varies with macro-structure)
DISCOURSE STEPS	default	(varies with moves)
SEMANTIC & SPEECH ACT RELATIONS	default	condition-consequence; statement-exemplification
LEXICO-GRAMMATICAL PATTERNS	default	formal
TOPICS	default	philosophical problems

Figure 3.4. PHILOSOPHICAL RESARCH ARTICLE frame

A few clarifications and elaborations are in order: First, as a reminder, the distinction between 'defaults' and 'sem' under 'facet' is meant to reflect that fact that some attributes are more flexible in terms of their fillers. For instance, although an expert genre user would likely have the expectation that the PHILOSOPHICAL RESEARCH ARTICLE is intended for other philosophers, clearly a given situation could be an exception to this rule, such as when an academic in a related field draws upon a philosophical work to inform their own.

Second, regarding specific attributes, most have been discussed above or in Chapter 2; however, some have not. Following Biber and Conrad (2009), the SETTING is the physical space in which the communication takes place. For written genres, the time and place are not typically shared by the participants; however, these factors can be important in written genres and thus have been included in this frame model. For example, Biber and Conrad point out that in newspaper articles, it is important that the audience have a specific sense of when the article was written. For the PHILOSOPHICAL RESEARCH ARTICLE, these genre attributes are not particularly noteworthy; however, despite being asynchronous, for any specific text the audience will likely have a definite sense of when the article was written, as this will shape some of their expectations about what they will see in the text, such as references to other works. The CONTENT DEVELOPMENT PROCESS and PUBLICATION PROCESS speak to the fact that expert genre users will have process knowledge (Tardy, 2009) about both the means by which the ideas for the work were developed (e.g., in a scientific report, this would include the expectation that there was some kind of experiment that was carried out) as well as the means by which the work was published (it was peer-reviewed; there were likely edits and modifications made in response to user feedback; etc.). Finally, EXIGENCE refers to the underlying impetus driving the creation of the text. This important situational attribute was not addressed in Paltridge's (1997) and Sinding's (2016) models.

Third, the fillers for some attributes have not been well-developed and some should be viewed as provisional. For instance, the filler for the MACCO-STRUCTURE is only a predication about what the research of this dissertation will reveal. In the case of the DISCOURSE MOVES and DISCOURSE STEPS, the fillers would occupy a large amount of space, as there will be expected fillers for each of the sections of the MACRO-STRUCTURE. Likewise, the SEMANTIC AND SPEECH ACT RELATIONS and the LEXICO-GRAMMATICAL PATTERNS can take several fillers, many of which are not yet clear to this author. The filler "formal" in LEXICO-GRAMMATICAL PATTERNS is a vague way of indicating that users will expect the word choice and syntactic structures to be distinctive from everyday speech.

To conclude, I would like to anticipate and address some potential concerns with the model. First, the default values for a given genre frame will vary depending on how "generic" or "specific" the frame is in the ontology. In the case of the PHILOSOPHICAL RESEARCH ARTICLE, for instance, the expected filler of AUTHOR is 'philosopher', while at a more general level, such as RESEARCH ARTICLE, the expected filler would also be more general (e.g., 'researcher').

Furthermore, in some cases, entire attributes may be missing for more general genre frames. For instance, PUBLICATION PROCESS will be absent at some point in the hierarchy.

Second, genre frames can be quite robust, and thus almost any model will fall short of a complete characterization of all of the "structures of expectations" in the head of the native speaker. To indicate just how robust one could make a genre frame, consider the following: Regarding situational factors, there is considerable room to develop nuanced relationships between the AUDIENCE and AUTHOR attributes. As we saw in Figure 3.3 above with COMMAND, any time this frame is used, there will be certain default expectations about the roles of each participant. Likewise for genres, such roles and relations will generally speaking be predictable. In the model above, I have indicated that a default expectation is that the author is someone working in higher education; however, additional expectations could also be spelled out. For instance, it is predictable that the author will be someone in a particular age range. Regarding textual features, there are numerous areas that can be fleshed out in detail as well. For instance, drawing upon the SFL tradition, one could specify prototypical lexical and grammatical structures used to accomplish the three major language functions—ideational, interpersonal, and textual (Halliday & Matthiessen, 2004; Simon-Vandenbergen, 2014).[20] Another option would be to draw upon corpus-based investigations of discourse to identify lexico-grammatical patterns associated with different genres. To the extent that corpus investigations simply make explicit what language users already implicitly expect to see, these results could be used to represent linguistic properties in the genre frame. For instance, in the genre ASTROPHYSICS RESEARCH ARTICLE, an early genre analysis by Tarone et al. (1981) revealed systematic patterns regarding how the researchers used passive voice. Such expectations could be used to add fillers to the attribute LEXICO-GRAMMATICAL PATTERNS.

Finally, following Sinding (2016), it should be noted that there are different degrees of "framiness" depending on the genre. This is particularly pertinent for the 'figure' sub-frame. Some genres have a high degree of framiness, meaning that many of the attribute-filler sets (e.g., the discourse moves and steps) are highly predictable. Examples of highly predictable frames include RESTAURANT MENUS, OFFICIAL FORMS, NEWSLETTERS, etc. Examples of 'low

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[20] This is not to say that most philosophers using this genre would have their structures of expectation organized in a way corresponding to the theory developed in SFL; rather, using SFL's framework would simply be a way of bringing order to what would otherwise be a messy bunch of knowledge.

framiness' genres or highly unpredictable genres, include NOVELS and LETTERS, where the way the discourse unfolds can vary considerably. In between are genres with moderate levels of framiness, which is where it seems apt to place the PHILOSOHPICAL RESEARCH ARTICLE. In other words, the model developed above—particularly for the figure sub-frame attributes— should not be viewed as a ridged and inflexible. In part, the purpose of this dissertation is to reveal just how conventional these attributes are.

3.3 Illocutionary and Perlocutionary Frame Elements

Broadly speaking, the essential frame attribute of a genre frame is its communicative purpose; however, communicative purpose can be understood in two respects: First, *a la* rhetorical genre studies, communicative purpose can be understood as a form of social action (Bawarshi & Reiff, 2010; Bazerman, 2012; Miller, 1984). In other words, the communicative purpose of a genre can be understood as the social ends to which a genre is put. For a PHILOSPOHICAL RESEARCH ARTICLE, for instance, this might include *solving a philosophical problem* and *advancing the field*. On the other hand, communicative purpose can also be understood as the essential cognitive activity that a genre user engages in when creating a text. For example, when writing a PHILOSOPHICAL RESEARCH ARTICLE, the genre user is *arguing*. Thus, when we ask the question, 'what is the communicative purpose of a philosophical research article', we could either answer that it is (a) to solve a problem in the field or (b) to argue something.

Below, I will flesh out this distinction and make it sharper by drawing upon Ian Bruce's (2008) distinction between social and cognitive genres and by drawing upon speech act theory (Austin, 1962; Searle, 1968; Searle & Vanderveken, 1985). Drawing this distinction will not only help to clarify differences in theoretical perspectives (e.g., between rhetorical genre studies and ESP genre studies), but it will also have implications for the way that ESP genre scholars understand move-analysis as a research methodology.

3.3.1. Cognitive and Social Genres

As was noted in Chapter 2, there is a wide range of approaches taken in describing discourse types (which I have broadly referred to as *genres*). For instance, Biber (1989) distinguishes between *text types*, which he argues are defined by characteristic linguistic features,

and *genres*, which he argues are characterized by non-linguistic criteria (such as social purpose). Reviewing the history of discourse typologies, Esser (2014) documents these various schools of thought, each of which has a nuanced way of carving up the typological space. For instance, some consider cognitive processes as the key element to defining discourse types (e.g., explaining, narrating, arguing, etc.); others consider key social functions as discourse defining (e.g., there are texts that aim at being aesthetic, those that aim at building scientific knowledge, and those that aim at aiding workplace activities); and others use combinations of variables, such as a text's topic as well as the way it organizes discourse (e.g., there are texts that are about human agents that also involve the temporal succession of events, called *narratives*, and there are texts about human agents that do not involve the temporal succession of events, called *behavioral texts*; etc.).

To help make sense of these various approaches, Bruce (2008) draws a distinction between *social genres* and *cognitive genres*. The former refer to "socially recognized constructs according to which whole texts are classified in terms of their overall social purpose" (Bruce, 2008, p. 8). Social genres are the discourse types that we are familiar with in everyday life, including RESEARCH ARTICLES, NEWSPAPER ARTICLES, NOVELS, DIARIES, SERMONS, etc. Importantly, each of these discourse types is defined primarily in terms of what it is that they accomplish in the social domain. The SERMON, for instance, gives moral and religious instruction to the community members, while the NEWSPAPER ARTICLE keeps the community updated about recent events. Cognitive genres, on the other hand, refer to "the overall cognitive orientation of a piece of writing in terms of its realization of a particular rhetorical purpose, something that is reflected in the way in which information is internally organized and related" (Bruce, 2008, p. 8). In other words, a cognitive genre is defined by the characteristic cognitive function that the author performs in a text. This cognitive orientation can be recognized by considering what it is that the author is doing with the information that they are conveying (broadly speaking): Are they arguing, evaluating, describing, comparing, explaining, etc.? Such genres are typically used in academic contexts and are labeled according to their primary cognitive function, e.g., ARGUMENTATIVE ESSAY, DESCRIPTIVE ESSAY, COMPARATIVE ESSAY, EXPLANATION, etc. Thus, Bruce argues that there are two key factors that can influence how categorization is carried out: the social purpose of a genre and the cognitive function characteristically performed in a genre.

This distinction nicely maps onto the one drawn above between the *illocutionary* and *perlocutionary* aspects of COMMUNICATIVE PURPOSE. The illocutionary aspect can be thought of

as the characteristic cognitive function of a genre and the perlocutionary aspect can be thought of as the social purpose. Still, Bruce's distinction seems to suggest that a discourse type will *either* be defined by one or the other feature, not both: Social genres are those in which the social purpose takes precedence while cognitive genres are those in which the cognitive activity takes precedence. There is some weight to this argument, as often a social genre does not have *a* characteristic cognitive activity, but *several*. For instance, a sermon can contain a narrative, an explanation, and an evaluation. On the other hand, for some cognitive genres, it might seem unclear what exactly the social purpose is. For instance, for an argumentative essay in an educational environment, it would seem that the social purpose(s) of arguing has been removed in favor of developing the cognitive ability.

While acknowledging that the social and cognitive aspects of a genre might not always have equal weight in terms of being *the* defining feature of a genre, I would nonetheless argue that we are able to find a core cognitive activity as well as a core social purpose for any genre. For instance, in the case of a sermon, although it may contain several cognitive acts, not all of them appear to have equal standing. The narrative and explanation are in a subservient role to the more over-arching cognitive function, which involves *giving instruction* and *direction*. This cognitive activity might broadly be described as *preaching*. Importantly, preaching also is connected with a key social effect: it aims to transform the beliefs and actions of the audience. It appears difficult to sever the one from the other. Likewise, in the case of an argumentative essay, although it may involve an artificial social environment, it still performs a social purpose within the broader educational environment: it aims to demonstrate to the instructor and other educational stakeholders that the student is competent and able to perform some cognitive task. Thus, rather than draw a distinction between social and cognitive genres, I find it more fitting to draw a distinction between social and cognitive aspects of any given genre. To help further motivate and build this distinction, I will draw upon speech act theory and show that, just as discourse at the atomic level contains both of these key characteristics, so too both show up in the longer stretches of discourse that we call "genres".

3.3.2 Illocutionary and Perlocutionary Aspects of Communicative Purpose

Broadly speaking, speech acts are the basic functions that language is used for in communication. These functions include, among others, *greeting*, *asserting*, *stating*, *promising*,

ordering, *commanding*, etc. Unlike genres, which are long stretches of discourse, speech acts correspond to the level of the sentence or the utterance. As Searle and Vanderveken (1985) put it, "[t]he minimal units of human communication are speech acts of a type called *illocutionary acts*." This technical understanding of speech acts, which built upon the early works of John Searle (1962, 1968, 1975, 1976), holds that there are two key components to them: (1) a force (or a function) and (2) a propositional content (Searle & Vanderveken, 1985; Vanderveken, 1990). For example, consider sentences 17-19 below, borrowed from Mann (1980).

17. Thomas Jefferson is buried in Virginia.
18. George Washington is buried in Virginia.
19. Is George Washington buried in Virginia?

While 18 and 19 have the same propositional content (*that George Washing is buried in Virginia)*, they have different forces: one is a *question* and the other a *statement*. On the other hand, 17 and 18 have the same force (both are *statements*), but different propositional contents.

It is important to emphasize that the force is an essential aspect of these "minimum units of human communication". That is to say, we cannot go around uttering propositional contents without also putting some force behind them. In Green's (2014) characterization, a content with no force would be "conversationally inert". One way of understanding why this would be is that whenever we make an utterance, there is some cognitive activity that characterizes what the language user is doing. As is perhaps already clear, the illocutionary force of an utterance thus nicely maps onto the cognitive purpose of a genre that was reviewed above. The only difference is that the cognitive purpose of a genre is not the force behind a single utterance or proposition, but the general force behind the entire discourse.

This is not to say that the cognitive purpose is simply a generalization of the most frequent speech acts that are carried out in a discourse; rather, new forms of illocutionary force emerge when propositional contents are combined and related to one another. As Asher and Lascarides (2001) argue, "[m]any types of speech acts must be understood relationally, because successfully performing them is logically dependent on the content of an antecedent utterance" (p. 188). For example, consider 20 and 21 (adapted from examples from Asher and Lascarides):

20. The coffee spilled all over the ground. The cat had knocked over the mug.

21. A: What time is it?

B: It's 12:22pm.

In 20, the second sentence is best described not as a *statement* or an *assertion*, but as an *explanation*. Furthermore, for a particular chunk of discourse to be dubbed an 'explanation', there must always be some antecedent propositions (or loosely put, "context"). In other words, explanations do not occur as single, isolated sentences. Likewise, in 21, sentence B is not just an *assertion*, it is an *answer*.

While at the level of an entire discourse, it becomes much more complex and messier to sort out all the relations amongst the individual propositions, we are, nonetheless, able to do so. This is evident both in move-analysis (which will be discussed below) as well as in the labels we give to what Bruce (2008) calls "cognitive genres". For instance, in calling a certain discourse type an 'argumentative research paper', we have provided a general description of the illocutionary force characteristic of the texts belonging to this genre.

So, the picture so far can explain the illocutionary aspect of COMMUNICATIVE PURPOSE; but what about the perlocutionary aspect? Several of the works noted above (e.g., Searle, 1968; Searle & Vanderveken, 1985; Vanderveken, 1990) have predominately focused on the cognitive activity that characterizes what a language user is doing with language; however, less attention has been paid to the social impacts that the language users aims to have by way of their illocutionary act. In part, this may be a consequence of looking at isolated and decontextualized utterances. For instance, in 17 above ("Thomas Jefferson is buried in Virginia"), while it may be relatively easy for a language user to identify the sentence as being a *statement*, it is not immediately clear what the language user is aiming to accomplish by making such a statement.

This is not to say, however, that speech act theorists have left this social aspect out of their account. J. L. Austin (1962)—one of the early leading figures in developing speech act theory—noted a three-fold distinction in regard to the acts that a speaker makes when they make an utterance. The first act, the *locutionary act*, is the act of saying something (i.e., uttering words with a certain meaning): This is what Searle and Vanderveken (1985) end up calling a propositional act

(the act of uttering a proposition).[21] The second act is the *illocutionary act*, which is the way in which the locution (the proposition) is used (e.g., whether we use it to ask a question, make a command, express an emotion, etc.). Finally, the third act is the *perlocutionary act*, which is what we intend to cause to happen **by** saying something (e.g., we intend to convince someone to believe something; we intend get someone to do something; etc.). As is well put by Green (2014), "[p]erlocutions are the characteristic aims of one or more illocution." Thus, for example, consider 22 below, which involves a police officer talking with someone they have just pulled over.

22. Step out of the vehicle.

The propositional content of 22 is 'that the driver steps out of the vehicle.' The force of the utterance—the illocution—is a command. Finally, the perlocution—the 'characteristic aim' of such an illocution—is the intent to persuade the hearer to carry out this action.

As might be evident in the example above, it is not always easy to keep a clear separation between the illocution and perlocution. One tempting way of drawing this distinction is to say that the perlocution is the characteristic *social effect* while the illocution is the characteristic *cognitive state*; however, the perlocutionary aspect of a speech act cannot simply be equated with the social effect. If this were the case, then we would have to say that the perlocution of a speech act is whatever effect ends up happening as a result of that utterance. Suppose, however, that my friend has had a terrible day at work. If I were to ask, "how's it going?", and as a result of this utterance, my friend reflects on their day and it brings them into a state of despair, surely, we would not want to say that the despair of my friend was the perlocution of the speech act I performed.

For similar reasons, the perlocution cannot be solely equated with the conventional social effect of a speech act either. For example, 'bless your heart' is conventionally used as a way of expressing sympathy or fondness for someone. Thus, the perlocution of such a speech act could be characterized as 'to get someone to feel better' or 'to cheer someone up'; however, in the

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[21]This is not to suggest that Austin and Searle had synonymous views. First, however, it should be pointed out that both Austin and Searle agree that a locutionary act is, itself, a complex act. At the very least, there is a phonetic act (uttering certain noises or making certain sounds) and a phatic act (uttering certain words). The authors disagree over the nature of the third aspect of the locutionary act: Austin calls this a "rhetic act" (using the words with a definite sense and reference), while Searle calls this a "propositional act". The crux of the debate between Searle and Austin hinges upon whether the meaning of a sentence is tied only to the locutionary act (Austin's view) or whether the meaning of a sentence contains both illocutionary and locutionary aspects (Searle's view). See Searle (1968).

southern United States, this expression can characteristically be used as an insult to mean something along the lines of 'you are too dumb to know any better'. Now suppose that a Northerner and Southerner are talking in 23 below:

23. N: So what did you end up getting your wife for Christmas?

S: Oh, I bought her a really expensive piece of jewelry.

N: Bless your heart.

Suppose that the Southerner takes the Northerner to be insulting them (perhaps the Southerner thinks that the Northerner is insinuating that buying expensive jewelry for your wife makes you a chump), and that, as a result, they become heated and angry; however, suppose that the Northerner meant this statement as an expression of fondness for the loving act of this dedicated husband: Was the social effect of the Southerner becoming angered and heated the perlocution of the Northerner's speech act? Arguably, such a social effect (getting someone to become heated and angered) is a conventional aim behind insulting someone; however, in this particular context, something would be amiss if the analysis held that the Northerner's perlocution was to get the Southerner angered and heated. The problem, it would seem, is that the perlocution cannot be completely divorced from the *aims* of the speaker. In other words, the perlocution is tethered to the cognitive in the respect that the perlocutionary must be an *intention* on the part of the language user.

The difference between the illocution and perlocution, then, cannot lie in the one being cognitive *per se* and the other being social *per se*; rather, it must lie in differing characterizations of these cognitive aspects of the language user. To start with the perlocution, clearly it is connected with social effects, so what we must say is that the perlocution is the *intention* on the part of the language user to modify or change the social environment in some way. As noted by Green (2014) above, the conventional aspect comes into play in the respect that the perlocution is the "*characteristic* aim" that a language user has in using particular speech acts (or, for our purpose, particular genres). The more difficult matter, then, is to specify how, exactly, the illocution is distinct. One way of doing this is to say that the illocution is the characteristic cognitive activity that the language user carries out in connection with either their utterance (for speech acts) or string of utterances (for genres). Importantly, by having the right frame of mind—i.e., by being in that

cognitive state—the language user can be said to have performed that speech act when the utterance is complete (of course, the language user must also get the hearer to recognize that they are performing that act, and thus there are conventional ways of using language to facilitate this process).

Another way of seeing this distinction takes us back to the topic of genre typologies. Tincheva (2017), generalizing different types of genre taxonomies based on communicative function, notes that they come in two flavors: (a) some describe *what* the language user is doing (e.g., arguing, comparing, describing, etc.); (b) others describe *why* the language user is doing what they are doing (e.g., to persuade, to inform, to influence, etc.). Applying this distinction to the perlocution and illocution yields the following:

- The illocution describes *what* the language user is doing, whether promising, stating, expressing, ordering, etc.

- The perlocution describes *why* the language user is doing what they are doing, whether to get someone to believe something, to get someone to do something, etc.

In this case, the distinction ends up being one of means and ends: the illocutionary act is the means by which the language user attempts to accomplish their perlocutionary intent.

Another important point, and one which helps to bring this distinction into focus, is that language users are able to use *performatives* to carry out illocutionary acts, while no such feat is possible with perlocutionary acts. Following Searle (1989), performatives can be understood as speech acts where the language user utters a sentence "containing an expression that names the type of speech act" (p. 536). Consider 24-27 below:

24. I'll come to the game.
25. I promise I'll come to the game.
26. Be quiet!
27. I order you to be quiet!

While 24 can be used to make a promise and 26 can be used to issue an order, these are not performatives since the sentence does not contain an expression that names the speech act being performed. On the other hand, 25 and 27 both explicitly name the speech act being carried out by

the language user. The important point, however, is that performatives show that language users can point to their own cognitive activity and say 'look here, I'm currently performing speech act [x]'.

Consider now the social effects that we intend our speech acts to have: Trying to issue a performative utterance for these cases falls flat and appears infelicitous.

28. I convince you that I'll come to the game.
29. I persuade you to be quiet.

The explanation for why 28 and 29 are infelicitous is that they represent the intended social effect as having been efficacious; however, the efficaciousness does not depend on the language user being in the right sort of cognitive state as is the case with the illocutionary aspect of the utterance; rather, the efficaciousness depends upon whether there was uptake and influence on the audience.

There is, however, a way for the language user to represent their perlocutionary act in a felicitous way, but it always involves using something along the lines of "attempt to" or "try to":

30. I am trying to convince you that I'll come to the game.
31. I'm attempting to persuade you to be quiet.

In these cases, the language user is now felicitously using language, since they are calling attention to their own cognitive state (their intent); however, notice that the means of accomplishing this end is absent. Of course, one way in which language users can 'try to convince' and 'attempt to persuade' is by making various kinds of illocutionary acts, such as issuing orders or making promises.

Applying this concept of *perlocution* to genres, then, yields the following interpretation: The perlocutionary aspect of the COMMUNICATIVE PURPOSE of a genre is the characteristic intended social effect that the language user aims at. It should be noted, however, just as the illocutionary aspect can be complex in that language users may engage in several cognitive activities when carrying out the genre, so too the perlocutionary aspect can be complex and multifaceted. For instance, while the main perlocutionary aim of the PHILOSOPHICAL

RESEARCH ARTICLE may be to solve a philosophical problem and advance the field, the language user may have several other aims as well, such as "private intentions" noted by Bhatia (2012; 1993). For instance, an author may be intending for their published work to not just advance the field, but to advance some underlying political agenda. Likewise, because of the pressure of publishing for promotion, an author's intent in producing the discourse may also aim at such ends. Nevertheless, as with the illocution, we can say that, despite this complexity, there tends to be a centrally defining perlocutionary aspect.

3.3.3 Implications for Genre Based Research

Much ink was spilt to draw this distinction: What work will it do for genre-based research? The answer is twofold: (1) it helps to bring conceptual clarity to the field and will help to bring theoretical differences with other approaches into sharper focus; (2) this distinction is relevant for move-analysis research methodologies.

Regarding the first point, ESP genre approaches have generally seen communicative purpose to be the defining feature of a genre (Bhatia, 1993; Swales, 1990); however, this point has been the subject of criticism and scrutiny. Askehave and Swales (2001), for instance, argue that communicative purpose is often illusive and complex, making it difficult to use communicative purpose as a key criterion for classifying texts as genres. As the authors argue, part of the difficulty lies in the multi-layered nature of communicative purpose, that is, language users may employ genres for multiple purposes. Furthermore, communicative purposes can change over time. For example, the authors analyze RESPONSE LETTERS TO RECOMMENDATIONS for applicants applying for assistant professor positions. They argue that communicative purpose is complex in the following respect:

> On the simplest level, we might conclude that these response letters are just straightforward notes thanking recommendation writers for their time and effort. But then the question arises as to why the professorial response letter writers should go to this trouble when there is no general expectation in the academy that they need to do so. Given this, one possible answer might lie in the reciprocity of correspondence as a kind of administrative politesse…Other explanations might include a wish to recognize and valorize this 'free service'…A further possible motivation might be to use the response letter as a way of indirectly promoting the particular institution in the eyes (and memory?) or the recommender (Askehave & Swales, 2001, pp. 202–203).

The frame-semantics model developed above can help to sort out some of this complexity by drawing a distinction between the illocutionary and perlocutionary aspects of communicative purpose. The first purpose noted by the authors would most fittingly be characterized as the illocution of the communicative purpose, for *thanking* is not an intended social effect aimed at by the language user (the perlocution); rather, it is the force behind the utterance, which is to say, it is what the language user is cognitively doing by using language. As Searle (1976) would classify it, *thanking* broadly belongs to the category of *expressives*, which are speech acts that involve expressing one's inner psychological state (others include *apologizing*, *congratulating*, *condoling*, etc.). Furthermore, in addition to this illocutionary aspect of RESPONSE LETTERS TO RECOMMENDATIONS, the frame model projects that there must also be a perlocution. The other possible purposes given by Askehaves and Swales (2001) in the passage above fit as fillers for this genre attribute. For instance, one characteristic social aim could involve showing respect to the letter writers (i.e., *politesse*), which socially would amount to aiming to influence the psychological state of the letter writer (not in a manipulative or cunning way, but simply wanting the letter writer to feel respected and acknowledged). The other aims are social in nature as well: one involves the intent of cultivating conditions to maintain a service free of charge, and the other involves adding prestige to one's home institution.

While the perlocution is still multi-faceted—and, therefore, following the argument of Askehave and Swales (2001), it would seem sensible to adopt an approach to genre analysis that sees the perlocution as being revealed through discourse and ethnographic analyses rather than being self-evident starting points for the analyst—it should be emphasized that the illocution appears to be relatively invariant: in the case above, for instance, the author is *thanking* the letter writer regardless of whether they are aiming to get the writer to feel well-respected, continue a free service, or maintain the reputation of one's university.[22] This would also apply to other cases investigated by Askehave and Swales (2001), such as COMPANY BROCHURES. In fact, the authors criticize Bhatia's (1993) representation of the communicative purpose of this genre as

[22] Granted, one might say that if one is intending to maintain a service free of charge or build the reputation of one's institution, then one is not *thanking* in a *bone fide* way, which really just means that they are not thanking at all; rather, the utterance is a factitious thanking. While I am inclined to agree overall that the ILLOCUTION would no longer have a filler of *thanking*, it would also seem to me that what has happened is a genre change. Following Swales' (1990) argument that parodies are not members of the genre category that they mock, similarly, it seems to me that instances such as this would not typically be classified as full-fledged genre members. Consider, for instance, if one were to discover that a newspaper article that had the façade of an informative report actually turned out to be a piece of propaganda on the part of the author advancing their political agenda. One might well respond, "this is not *news*!".

being *promotional*. The authors note another purpose might include *building relationships with clients*; however, drawing once again on the distinction between the illocution and perlocution, we can see that *promoting* best fits as an illocutionary act while *attempting to build a relationship* (or *attempting to sell a product*, for that matter) are both perlocutionary acts. A final point to note is that, even granting there are multifaceted perlocutionary intents that a genre is used for, we may still want to draw a distinction between what might be deemed as a "characteristic" or "conventional" social aim of the genre (e.g., *an attempt to make letter writers feel respected and appreciated*) versus those "private intentions" (Bhatia, 1993) that shrewd language users employ genres for (e.g., *an attempt to bolster one's reputation* or *an attempt to exploit some free service*).

This distinction can also help to shed light on differences across genre paradigms. ESP genre studies is often positioned as understanding communicative purpose in a social respect (e.g., Hyon, 1996; Swales, 1990; Tardy & Swales, 2014); however, based on some of the analyses of communicative purpose in the extant ESP literature—such as the cases analyzed by Askehave and Swales (2001) above—this would seem to suggest that communicative purpose is being understood as a conglomerate of the illocutionary and perlocutionary aspects. While I do think that it is correct to understanding communicative purpose as containing both features in that it is impossible to understand a speech act as being devoid of one or the other, other paradigms appear to highlight and focus on a single aspect of communicative purpose. For example, in rhetorical genre studies, the great amount of emphasis placed on seeing genres as "social actions" (Bazerman, 2012; Miller, 1984) suggests a great amount of concern with the social impacts that genres have. On the other hand, in Biber and Conrad's (2009) approach to genre and register, communicative purpose appears to highlight the illocutionary acts of the writer (e.g., to narrate, report, describe, inform, etc.).

The second impact of this distinction is in regard to move-analysis as a methodology. In move analysis, the moves are understood in connection with the communicative purposes of the text (Cotos et al., 2015). For instance, Swales' (1990) *create a research space* (CARS) model posits that the main purpose behind the introduction of scientific research articles is for the author to carve out for themselves a meaningful place for their research. Regarding this over-arching purpose of the introduction, one could analyze it in terms of both illocutionary and perlocutionary aspects. For instance, the illocution would seem to be something along the lines of *arguing that one has a meaningful research contribution to the field* and the perlocution would be something

along the lines of *attempting to persuade others that one's research contributes to the field*. Furthermore, as noted in Figure 2.1 in Chapter 2, this communicative purpose of the introduction is accomplished through three major moves: (1) establish a territory, (2) establish a niche, and (3) occupy the niche. In turn, each move is accomplished through steps, such as (a) outlining one's purpose and (b) indicating article structure for move 3. Once again, we can see that employing the concepts illocution and perlocution can help to shed light on what is happening here: Many of the steps are characterized in terms of illocutionary acts (*outlining*, *stating*, *announcing*, *reviewing*, etc.). The moves, on the other hand, seem more amenable to being understood via both concepts. Establishing a niche, for instance, might primary involve *arguing* and *reviewing* research as illocutionary acts; however, the perlocutionary intent behind doing this could, for example, be characterized as *attempting to convince the audience that there is a research gap*.

3.4. Prototypicality Effects in Text Classification

Some genre attributes are strongly associated with genres, such as the characteristic AUDIENCE, PRODUCTION CIRCUMSTANCES, MACRO-DISCOURSE STRUCTURE, etc.; however, for any given text, such characteristic aspects do not *have to* be present for the text to be classified as a member of a genre. In the frame model developed above, these attributes contrast with the COMMUNICATIVE PURPOSE of a genre, which I have argued is relatively invariant and is required for genre classification (i.e., for a text to be classified as a member of a genre, it must have the characteristic COMMUNICATIVE PURPOSE of that genre). Consider, for example, the default filler for AUTHOR: While for the PHILOSOPHICAL RESEARCH ARTICLE this is *a philosopher* (i.e., someone who practices philosophy as their profession, works in a philosophy department, etc.), other fillers are possible. For instance, a recent publication titled "Gettier Across Cultures" in the reputable philosophical journal *Nous* includes several authors, some of whom do not work in philosophy departments and would not be considered philosophers by the characterization given above (Machery et al., 2017). Nevertheless, despite the fact that not all the authors fall into this structure of expectation, the article is still, without doubt, a member of the category PHILOSOPHICAL RESEARCH ARTICLE.[23]

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[23] One could trivially say that anyone who publishes on a philosophical topic or in a philosophical journal is a philosopher; however, the more interesting structure of expectation (and one which is much more detailed and fleshed out) concerns the occupational background of the author. In the case of the former view, the conceptual model would be subject to the following objection: Native speakers have default expectations concerning numerous

The aim of this section is to explain such prototypicality effects in genres. This section will begin by examining what prototypicality entails, and it will then argue that the frame model developed above is compatible with research findings in this area.

3.4.1. What are Prototypicality Effects?

To begin, a quick refresher is in order. As was noted in section 3.2.1, the Classical Theory of categorization is an account of categories which attempts to explain them in the following way: Categories are characterized by sets of necessary features (which can also be called "attributes") which jointly determine sufficiency for category membership. In other words, any particular thing in the world that possesses all of the necessary features of the category will be included as a member of that category. Related to this core principle are several others worth noting: (1) Features in categories are binary (i.e., individuals either have a category feature or they don't); (2) categories have clear cut boundaries (individuals either belong to a category or they don't); and (3) individuals belonging to a category have equal membership status (i.e., all members of a category are full-fledged members) (Taylor, 2003). The third principle is worth highlighting: If categories are just defined by having sets of necessary features, then any object that possesses such features belongs to that category; however, once "inside" the category, there is no principled way of saying (at least, using the Classical Theory) that one of the members is somehow more special, exemplary, or central than any of the others. Thus, for example, let us suppose for the sake of argument that the category BIRD consists of the following necessary features: [beak], [wings], [feathers]. Any entity in the universe will either possess or not possess each of these three features. Those that possess all three will be classified as a member of the category BIRD; thus, for any given entity in the universe, it will either belong or not belong to the category BIRD. Finally, for any entity that belongs to the category, it will equally be a BIRD, that is, no thing possessing a beak, wings, and feathers will be possess more "birdiness" than any other thing that also possesses these features.

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background features about the author. They would be quite surprised to find out, for instance, if a philosophical research article were published by a 12-year old who had not yet completed graduate school. However, if a philosopher is simply 'someone who publishes philosophy papers' or 'writes about philosophical topics', then this characterization of the attribute could not account for the surprise of the language users in discovering characteristics about the author.

There have been various objections to the Classical Theory.[24] Of interest for our purposes, there has been pushback against the idea that category membership is determined by possessing sets of necessary features and that all members of categories are equally members. One of the earliest arguments against the notion that categories are sets of necessary features is traced back to Ludwig Wittgenstein's *Philosophical Investigations* (Lakoff, 1987). Wittgenstein challenges this idea by asking us to consider whether the members of the category GAME all share common features (i.e., "necessary features"). Rather than posit that all games possess certain features, Wittgenstein says…

> For if you look at them [games] you will not see something that is common to *all*, but similarities, relationships, and a whole series of them at that…Look for example at board-games, with their multifarious relationships. Now pass to card-games; here you find many correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost. (Wittgenstein, 1986, pp. 31–32).

In place of the Classical Theory of categorization, Wittgenstein characterizes the relationship between members of a category as one of *family resemblance*. In other words, what unites the members of a category is not that all of them possess some single feature of some set of features, but that they in some way *resemble* one another.

This idea would later be picked up and serve as part of the inspiration behind numerous experimental studies aimed at understanding what has come to be called *prototypicality effects*. Among several focal points, this research examined (a) how subjects rated the goodness of fit for examples for some category (e.g., "on a scale of 1-7, how good of an example is a robin for the category BIRD?"); and (b) how long it took subjects to respond when presented with members of a category (e.g., respond true or false to the following: "a robin is a bird"); (Lakoff, 1987). The research findings in both cases do not seem compatible with Classical Theory's notion that all members of a category have equal status as members. For example, Elanor Rosch (1975), one of the early pioneers in this area of research, examined the goodness of example ratings that participants gave for different types of FRUIT. The study found items such as oranges, apples, and bananas received the highest goodness ratings, while items like dates and coconuts were much lower (which isn't consistent with the Classical Theory, which would predict all would receive the same rating). This *graded membership*, as it would come to be called, was found for other

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[24]See Taylor (2003) pp. 35-39 for an overview.

categories in the study as well, such as FURNITURE, VEHICLES, WEAPONS, BIRDS, etc. Rosch (1975) also found that response times varied for category members, which also would not be predicted by a theory that holds all members are equally members of a category. The implications of such research suggest that some individuals are more *representative* members that others. These central, most representative members within the category are often referred to as *prototypes* (Löbner, 2013; Taylor, 2003).

Nevertheless, while Wittgenstein's arguments against necessary features and Rosch's experiments surrounding prototypicality effects suggest that the Classical Theory of categorization has problems, these arguments do not represent alternative theories of categorization. On one hand, Wittgenstein's suggestion that family resemblances explain category membership is more of an effect in need of explanation than a developed theory, for what are *resemblances*? How is the mind able to determine when two things partake in a resemblance relation? Is resemblance sufficient for categorizing two things in the same category? Etc. On the other hand, regarding prototypicality effects, as Lakoff (1987) points out, the following questions remain in need of an answer:

1. Do the EFFECTS [i.e., prototypicality effects], defined operationally, characterize the STRUCTURE of the category as it is represented in the mind?

2. Do the PROTOTYPES constitute mental REPRESENTATIONS?[25] (Lakoff, 1987, p. 43)

Regarding the first question, the point is, just because participants rank items differently within a category ("graded membership"), this does not imply that the structure of the category is itself graded ("graded structure"—i.e., some members are full members while others are only *partial* members). Löbner (2013) points out, for instance, that the concept ODD NUMBER shows prototypicality effects (numbers like "1", "3", and "5" are seen as best examples); however, the number "13,432,423", although it is not a best example, is not as a result somehow only a partial member of the category ODD NUMBER—it is 100% a member just as the numbers "1", "3", and "5". Regarding the second question, there have been numerous "prototype theories" that have

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[25]Lakoff (1987) also interestingly notes that in her later career, Rosch gave up attempting to provide theoretical interpretations of her experiments. She also admonished those who used the experiments to talk about "prototypes" as if there were some mental representation or theory of concepts and concept processing underpinning the term; rather, all a "prototype" refers to is the prototypicality judgements observed in the experiments.

attempted to answer this question in the affirmative. One view is that prototypes are memories of specific, concrete individuals (sometimes called *exemplars*), while another is that they are abstract collections of features (Saeed, 2016; Taylor, 2003).

Before concluding this section, I would like to address a possible concern: The examples discussed above were physical objects (e.g., BIRD and FRUIT). One might wonder, however, whether prototypicality effects also occur in categories related to language and discourse. Indeed, there are good reasons for thinking this is the case. Lakoff (1987), for instance, has argued that prototypicality effects can be seen in the following areas: markedness (when a linguistic function has an ostensive mark, such as the 's' on most plurals), phonology, morphology, syntax, and clause types.[26] For example, with respect to clause types, Lakoff argues that some are more basic (i.e., some are better examples of clauses) than others. Specifically, simple active declaratives have a privileged status, while other types are more peripheral (i.e., non-basic). For example, consider 32, 33, and 34 below (32 and 33 have been modified and adapted from Lakoff).

32. Joe drives a car. (simple active declarative)
33. A car is driven by Joe. (passive)
34. It is Joe who drives a car. (it-cleft)

As Lakoff points out, multiple grammatical theories at the time (e.g., Chomsky's) would treat basic clauses as having a special status in regard to the relationship between form and meaning, suggesting that some clauses are more 'clausier' than others.

As a more detailed example, Lakoff considers the Japanese classifier *hon*, which is used for several classificatory purposes.[27] Lakoff points out that this classifier has prototypicality effects, evidenced from how Japanese language users choose to extend (or not extend) the use of this grammatical device. The central cases for which *hon* is used are long, thin objects, such as pencils, hair, sticks, staffs, etc. Lakoff notes, however, that there is a wide range of extensions of *hon* that are less central, such as (a) to martial arts contests (which involve staffs and swords—i.e., long, thin objects), (b) to hits in baseball and shots in basketball (which involve long, thin trajectories),

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[26]See Lakoff (1987) Chapter 3 for more details (pp 58-67).

[27]A classifier is a word or morphological unit that goes with a noun and is used to classify the noun into some broader category. It is debatable whether English has classifiers in the same sense that many East Asian languages do; however, English examples might include the following: 'Three **bottles** of beer'; 'Five **sheets** of paper'; etc.

and (c) to telephone calls (which take place through long, thin wires), etc. Importantly, Lakoff notes that not all Japanese speakers include noncentral cases. For example, he notes that some speakers will use *hon* with baseball pitches while others will not; however, as Lakoff points out "[b]ut to my knowledge, every speaker of Japanese includes the central members—the candles, staffs, baseball bats, etc."

In regard to discourse and genres, Paltridge (1997) argues that such effects can be observed in research articles in journals such as *Nature*. He notes that some reports are displayed as 'letters to the editor', which contrast with the more conventional form of reports. Nevertheless, as Paltridge points out, these papers are still deemed as research reports despite lacking typical features that one would expect see in more central cases. As another discourse example, Paltridge notes that Wittgenstein's work, *Philosophical Investigations* (noted above), does not fit the cookie cutter mold of a philosophical book for the time (written sometime in the 1930s and first published in 1953); nevertheless, this work is still classified as a work in philosophy even though we would not expect someone to cite this as a prototype of what a philosophical work at the time would like look. Thus, based on these admittedly cursory remarks, it would seem that language-related categories are no exception: They too display prototypicality effects.

The point worth emphasizing here is that the Classical Theory clearly has issues and any theory that attempts to explain how humans categorize will need to account for (a) how categorization can still occur even when features are non-essential and (b) why prototypicality effects occur (e.g., the fact that certain instances are seen as better examples than others and that subjects have faster response times to certain members).

3.4.2. Frames and Prototypicality

In the definition of genre given in section 3.1, I posited that the variability in certain frame elements can explain prototypicality effects in discourse classification. Having laid the groundwork in the previous section for what prototypicality entails, I will now defend the claim made in the definition and show how the frame model developed above handles (a) non-essential attributes in frames as well as (b) prototypicality effects.

To account for (a) and (b), let us first recall the concepts *attribute*, *facet*, and *filler* used in the frame model. Attributes are "parameters of description" of a frame (Barsalou, 1992); facets are the different kinds of fillers that a frame attribute takes (Nirenburg & Raskin, 2004); and the fillers

are the sub-concepts that an attribute characteristically takes, or, in specific instances, the fillers are specific individuals. To explain (a), the concepts *attribute* and *filler* are of particular importance. When saying that certain "features" are not necessary for category membership, it is important to distinguish between these two concepts. A genre frame's *attributes* are all relatively invariant, that is to say, for example, any instance of a PHILOSPHICAL RESEARCH ARTICLE will contain the attributes listed in Figure 3.4 (e.g., AUDIENCE, PRODUCTION CIRCUMSTANCES, CHANNEL, DISCOURSE MOVES, etc). Thus, the non-essential nature of the features of the texts is in regard to the fillers. As was argued above, for instance, the filler for AUDIENCE need not be the same for every instance of a genre, for in some cases, it may deviate from the expected filler (i.e., *philosopher*). The *sem* and *default* facet types attempt to capture this variability: Both facet types are similar in that they take expected sub-concepts for fillers; however, they differ in that the sem-facet takes a relatively invariant filler while the default-facet is more flexible.[28] By allowing for this flexibility, not all members of a genre have to share the same fillers for the attributes.

The explanation for (b)—prototypicality effects—also relies on these same concepts. The reason why certain texts may be deemed more prototypical of a genre than others is due to the fact that certain texts will have a larger percentage of fillers that match the defaults than others. The model predicts that texts that possess all the expected defaults will be seen as the best examples of the category ("best" in the respect that they are most salient examples that come to mind for the genre—i.e., they are the most prototypical). Furthermore, because in these cases the fillers are what the genre user expects to see when looking at any given text, this explains why such instances would be more quickly judged as members of the category.

Before concluding this section, I should emphasize a qualification: While the fillers for most of the attributes of the genre frame are flexible in the respect that deviations from the defaults will not preclude the text from being categorized as a member of the genre, the fillers for the COMMUNICATIVE PURPOSE attribute are not as flexible. Following Swales (1990), this aspect is deemed as an essential feature of the genre. In some respect, this may seem to align with the Classical Theory of categorization in that it posits there are certain essential features that define a category; however, there are relevant differences which have been developed in the course of this

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[28] I say "relatively" because I do not want to go so far as to say that the sem-facet has an invariant filler; rather, this should be viewed as a matter of degree: the sem-facet captures cases that are closer to invariant, while the default-facet captures cases that are less fixed (but are still the most likely filler for a given attribute).

chapter. Most outstanding, the Classical Theory more closely aligns with the dictionary definition of meaning (which precludes so called "encyclopedic knowledge"); however, this frame model does not draw such a distinction in an attempt to capture the large chunks of knowledge that must be posited to explain the semantic competence of language users. At the same time, the model attempts to preserve the intuitive appeal to Classical Theory. In particular, for concepts such as BACHELOR, not all features are created equal. While there may be expectations that a given member of BACHELOR is, for example, YOUNG, aspects such as being a MALE and UNMARRIED clearly have a different status. Furthermore, although I've argued that all attributes (and, by extension, concepts) may be subject to revision—including "essential" attributes like MALE and UNMARRIED—this should not be taken to mean that all attributes are equally malleable: Some are more fixed than others.

3.5. Basic Level

The final aspect of the definition to genre given in section 3.1 concerns *taxonomy*, that is, the demarcation and arrangement of genres. This topic is motivated by several considerations. First and foremost, the level of specificity for any given frame will result in different frame attributes being called to mind. In the case of genres, when we encounter a text, we can typically classify it with very little conscious effort. Once this is done, a certain frame has been activated and, with it, all the accompanying expectations. If, for example, it is a SCIENTIFIC RESEARCH ARTICLE, we may well expect to find an introduction, a methods sections, a results section, and a discussion. We may also expect to find in the introduction the rhetorical moves identified by Swales (1990). As with genres, so too with other everyday activities, whether it be an object, an organism, or some kind of event or routine: Once we see the *particular* experience as a *kind* of experience, numerous structures of expectation will have been activated. The focus of this dissertation is the PHILOSOPHICAL RESEARCH ARTICLE; however, the attributes associated with this category clearly differ than from more general categories (e.g., RESEARCH ARTICLE) and more specific categories (e.g., HISTORY OF PHILOSOPHY RESEARCH ARTICLE). Thus, a key question concerns where my dissertation focus falls within the broader genre taxonomy.

A second motivation is that there has been much debate over the correct criteria to use when taxonomizing genres (some of which was reviewed in chapter 2). In other words, when we go about building a taxonomy, what principles can and should we use to do so? A final related

motivation is that building a precise genre taxonomy can help clear up terminological and conceptual disputes that arise. For example, do we apply the word "genre" only to certain levels in the taxonomy, similar to how "genus" is employed in biology? Or is "genre" a broader, more catch-call term, akin to "category". Regarding conceptual disputes, is HISTORY OF PHILOSOPHY RESEARCH ARTICLE a germane conceptual category? This chapter attempts to address these issues primarily by drawing upon the notion of *basic levels*, which will be fleshed out below.

3.5.1 How to Taxonomize Complex Communicative Events

Our starting point for considering genre taxonomies is the principles that are used to build classification schemes. However, before looking at such principles, let me first address a few terminological issues that might arise and stipulate some definitions going forward. First of all, "complex communicative event" will be used interchangeably with "text", both of which mean any particular event in the world which essentially involves some form of communication. In other words, complex communicative events are the *objects* which are categorized. The names for the categories that are used when classifying these objects (whether "genre", "register", "text type", etc.) are determined by the taxonomy that is built. The term "discourse type" will be used as a neutral, catch-all term that does not specify a particular level within the taxonomy. On the other hand, "genre", generally speaking, falls somewhere in the middle both with respect to how it is used in academic research as well as everyday conversation. Below, I will argue that "genre" is best characterized as the *basic level*; however, for the time being, I would only note that it is typically used in a quite flexible way, although the top and bottom levels of the hierarchy are not usually associated with this term (e.g., NEWS is not usually denominated by "genre", nor is NEW YORK TIMES OP ED; however, NEWSPAPER ARTICLE typically is).

Regarding the principles that are used to carve up complex communicative events into categories, three broad types are most commonly used.

1. **Cognitive processes** or **cognitive functions**: Tracing the history of different discourse taxonomies, Esser (2014) notes how multiple authors have used the characteristic cognitive activity carried out in the discourse as the principled basis for its classification. This could include, for instance, categories such as ARGUMENATION and INSTRUCTION, which are based upon the cognitive acts of judging and planning respectively. These categories tend to be quite coarse-grained (e.g., COMPARE-CONTRAST; REVIEW; DESCRIPTION; NARRATIVE, etc.).

2. **Social factors**: Genre research paradigms such as rhetorical genre studies have focused on social action (i.e., social purpose) as the key factor for defining genres (Bazerman, 2012; Miller, 1984), which can also be used as the key criterion for demarcating discourse types. While social purpose has arguably received the most focus among social factors, Esser (2014) notes that taxonomizers have used other social factors as well, such as the relation between the text and the audience (whether it is intended privately or publicly, e.g., a JOURNAL or DIARY vs. a BIOGRAPHY or MEMOIR).

3. **Textual factors**: While most taxonomies have primarily relied on cognitive and social factors, some have attempted to use discourse organization and/or lexico-grammatical characteristics to classify texts. Most outstanding, Biber (1989) uses co-occurring sets of lexico-grammatical properties as the essential principle for demarcating discourse types (see Chapter 2 for a review).

Two comments about these factors: First, a taxonomy need not be based on only one broad type of criteria, for one could use multiple factors. For instance, Virtanen's (1992) framework distinguishes between two types of classification: (1) *discourse type*, which is characterized by the cognitive function of the text (e.g., to narrate, argue, describe, etc.), and (2) *text type*, which is characterized by textual strategies that the author uses (e.g., whether one builds a narrative, provides a set of instructions, gives a description of something, builds an argument, etc.). The discourse type and text type often form a natural pairing in the following respect: the cognitive act of arguing, for instance, is often accomplished by using the textual strategy of building an argument in the text. Virtanen shows, however, that certain textual strategies can be used to accomplish discourse functions that are not naturally paired. For example, one can argue by using a narrative strategy (e.g., in the case of a religious parable or in works such as Aesop's *Fables*). Thus, on one hand, we might classify one of Aesop's Fables as belonging to the narrative category (as a text type), while on the other, it is also a moral argument of sorts (as a discourse type).

Second, what may be clear from the three factors noted above is that most of the emphasis placed upon classifying discourses into types has not occurred *vertically* within taxonomies but *horizontally*, that is, researchers have tended to focus on a certain level in the taxonomy and have then attempt to characterize all complex communicative events into discourse types at that level. Sometimes this focus has been relatively coarse-grained. Biber's (1989) taxonomy, for instance, identifies 8 fundamental text types. Berkenkotter and Huckin (1993), on the other hand, opt for a much more fine-grained approach, seeing genres as localized and specific as "a letter from a Utah bank promoting a new savings program" (p. 488). Less attention has been paid to developing taxonomies that classify texts at different levels. This is important because debates over correct

taxonomies and classification schemes are sometimes more semantic than substantive in cases where one scheme operates at a relatively coarse-grained level while another is more fine-grained and yet both want to use the same denominations (e.g., "genre" or "text type").

This is not to suggest that all debates over taxonomies are just verbal disputes. Certainly, some are substantive, yet with so many different criteria used to carve up the discourse type space, one might wonder whether there is *a* correct way of doing so. Could one argue, for instance, that taxonomizing based on cognitive factors is more correct than using linguistic factors? It would seem that the answer in part relies on two separate broad types of criteria that we may consider in assessing a taxonomy. One group of criteria concerns whether the categories are in some sense *objective* or *real*, that is, do the categories accurately carve up the world. This could be understood in two ways: (a) metaphysically objective or (b) psychologically objective. The former would mean that there are objective categories that exist out there in the world. If this is the case, then one taxonomy could more correctly identify and demarcate these categories than another. The latter would mean that categories are formed and exist in the mind. If this is the case, then one taxonomy could also more correctly identify and demarcate these categories than another.

Still, even supposing that one uses objectivist criteria, it is not clear that one scheme must necessarily take precedence. For instance, writing about models used for categorizing biological species, Lakoff (1987) notes that there are two major conflicting and competing theories: (a) cladists, who classify according to shared derived characteristics resulting through the process of evolution, and (b) pheneticists, who classify according to similarities in forms and functions (without consideration of how the organisms are related with respect to their evolutionary history). While these classifications schemes often overlap, they can come apart. Lakoff gives an example borrowed from Stephen J. Gould, where three different species of zebra are grouped differently according to cladists and pheneticists. While pheneticists classify all three into a single higher order group, which we might call "zebra", the cladists recognize two distinct higher order groups, one of which is grouped with horses. While both camps are presumably building their theories around what I have termed "objective criteria", it is not clear that there is a reasonable way of saying that one is more correct than the other. Lakoff makes this point by arguing "[t]here is nothing wrong with saying that there are just two different taxonomic models of life forms, which are concerned with different and equally valid issues" (Lakoff, 1987, p. 127).

The other group of criteria, however, is pragmatic in nature. This group of criteria is concerned with how tractable the taxonomy makes problems and how easily it can be applied. If one taxonomy is highly abstract and abstruse, despite perhaps latching onto what is metaphysically or psychologically real, it may nonetheless not have much to offer in way of, say, helping students learn to navigate complex academic discourse. The thrust of such an argument can be seen Berkenkotter and Huckin's (1993) criticism of traditional genre classifications. The authors argue that these traditional classification schemes "can describe only superficial parameters of form and content" (Berkenkotter & Huckin, 1993, p. 488). In part, the force of the argument concerns the *usefulness* of such schemes: More local classification schemes offer richer amounts of information about form and content. From an educational standpoint, instructors might find that this better equips students to efficaciously employ genres to accomplish social purposes.

These considerations suggest that there is reason to reject the proposition that there is only one correct way of classifying (or taxonomizing) texts; rather, it would seem that the measure of a taxonomy's success very much depends upon what it is intended to accomplish. For instance, consider two different taxonomic models of discourse types that nicely correspond to the cladist-pheneticist distinction drawn above: Biber's (1989) work is closely related to the work done by pheneticists in that texts are grouped based upon formal (lexico-grammatical features) and functional characteristics. On the other hand, diachronic research on texts as well as interdiscursivity (the appropriation of formal and rhetorical features of texts) are more in line with cladists. Bhatia's (2008) research on interdiscursivity might be considered an example of what a cladist-type approach might look like. He explores how corporate annual reports draw upon two other types of discourse: accounting discourse and public relations discourse. Thus, using this framework, one could understand the genre CORPORATE ANNUAL REPORT as evolving out of these other discourses. Such an understanding of discourse types could lead to a different classification of texts than Biber's model, even if two discourse types were to overwhelmingly share dimension features in a multidimensional analysis.

For the purposes of this dissertation, the motivation behind building a taxonomy is to get clear on the taxonomic level for the frame analysis of the PHILOSOPHICAL RESEARCH ARTICLE to assure that the attributes and values are appropriate (i.e., not overly vague nor too specific). In addition, more broadly, the theoretical understanding of genre advanced in this work attempts to situate genres within research on categorization. In this latter respect, the motivation

behind building a genre taxonomy is to help us explain how texts are categorized into genres. In order to adequately do this, a taxonomy must be compatible with research that has shown there is a *basic level* in categorization.

3.5.2 The Basic Level of Categorization

The basic level of categorization is the idea that, with respect to categories, there is a default level in taxonomic hierarchies that is "cognitively and linguistically more salient than others" (Taylor, 2003, p. 50) (what exactly "salient" means will be explained below). This conception has emerged from a series of research experiments on how humans categorize, much of which has been connected with the findings concerning prototypicality reviewed above (Lakoff, 1987). This idea can best be got at by way of example. Consider Figure 3.5 below. What is the name of this object?[29]

Figure 3.5. An object in need of classification (source: pixabay.com)

Presumably, the first name that came to mind is "pencil", suggesting this was categorized as a PENCIL. As Löbner (2013) points out, the fact that most language users would reach the same answer about many everyday objects is not insignificant, for objects can be classified into many different categories. For example, with the case above, one could have also said, more generally, that it is a "writing utensil", an "artefact", or an "object"; more specifically, one could have said it is a "wood pencil" or a "graphite pencil", as distinct from a "mechanical pencil". The same thought experiment can be carried out by looking at other objects in one's immediate vicinity: I see a computer, a backpack, a cup, etc.; however, in most everyday contexts[30], I would not say that I see a Toshiba Satellite nor an electronic device; not a laptop backpack nor baggage; and not a latte

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[29] My example and discussion below was inspired by Löbner (2013) and Taylor (2003).
[30] There are nuanced contexts that would call for the use of more general or more specific categories. For instance, if I take my computer to a computer repair shop and the clerk asks "what do you have for me?", I would not say "a computer".

coffee cup nor dishware. The picture that emerges is that there is a basic level, which lies somewhere in the middle of the taxonomy, as well as superordinate (categories that are more general and inclusive) and subordinate (categories that are more specific and exclusive) groupings. Figure 3.6 shows a simplified version of such a taxonomy with only one superordinate and one subordinate level (of course, more are possible).

Superordinate Level

WRITING UTENSIL

PEN   PENCIL

Basic Level

BALLPOINT   ROLLERBALL   MECHANICAL   WOOD

Subordinate Level
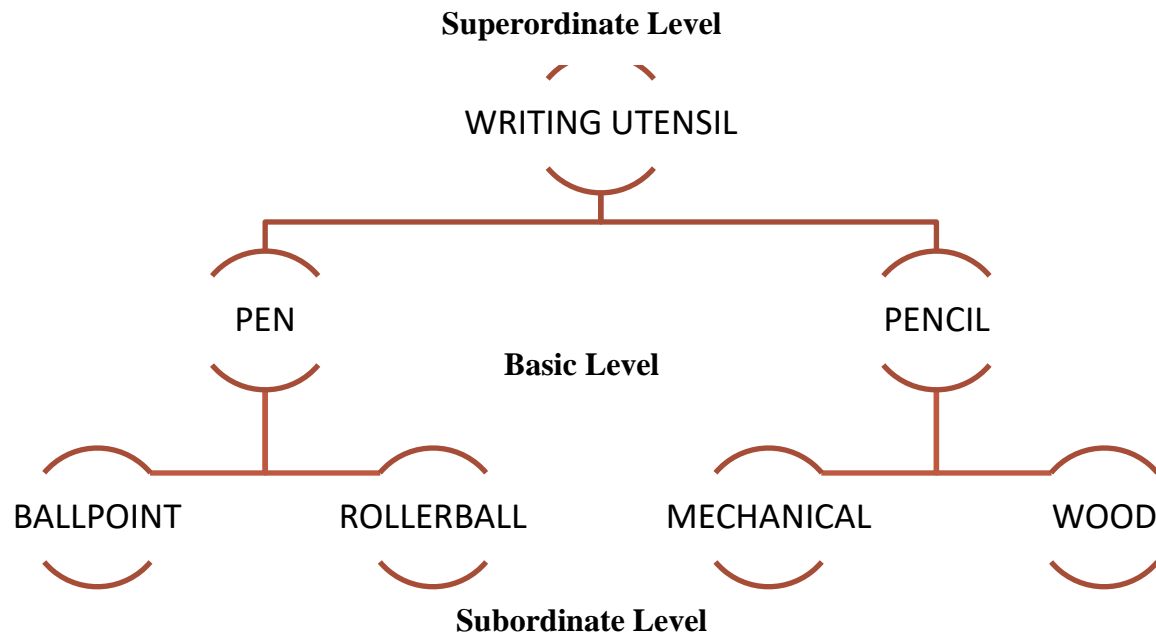
Figure 3.6. An abridged taxonomy of writing utensils

This raises the question of what makes the basic level "linguistically and cognitively salient". First of all, the basic level is distinctive in that it tends to be learned first (Löbner, 2013). For instance, Rosch et al. (1976), analyzing the period of initial language development of a child, found that for superordinate categories such as MUSICAL INSTRUMENT, FRUIT, CLOTHING, and FURNITURE, the child overwhelming used based level terms.[31] Second, the basic level is linguistically distinctive in that words at this level tend to be "short and structurally simple (i.e., monomorphemic)" (Taylor, 2003, p. 51). In the examples above, for instance, it can be seen that

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[31] See Rosch et al. (1976, p. 425). One worry is that the name alone is insufficient for being sure that the child was using the relevant conceptual category. For instance, even if the child uses the word "guitar", one might wonder whether a broader (e.g., MUSICAL INSTRUMENT) or narrower (e.g., CLASSICAL GUITAR) category was activated.

many subordinate categories have compound names (e.g., "wood pencil", "laptop backpack", "coffee cup". Research by Rosch et al. (1976) and others has revealed several other cognitive principles that characterize the basic level. Below are three key principles, based on Croft and Cruse (2004, pp. 83–84) and Löbner (2013, pp. 277–279):

1. Basic level categories are the highest-level (the most inclusive[32]) categories that have clear visual images associated with them and whose objects have similar shapes. It is easy, for instance, to visualize HAMMER, but not so easy to visual TOOL (without visualizing some specific kind of tool). Likewise, one can visualize BIRD but not ANIMAL.[33]

2. Basic level categories are the highest-level categories that include information about typical parts. For instance, the category HAMMER has typical parts (i.e., attributes), such as the HANDLE and HEAD, and BIRD has typical parts, such as WINGS and BEAK; however, it is not clear that parts can be assigned to the category TOOL nor to ANIMAL.

3. Basic level categories are the highest-level categories that can be described by characteristic patterns of action and interaction (particularly with humans). For example, the category HAMMER implies certain typical interactions with humans (you grab it, swing it, use it to pound something, etc.); BIRD is characterized by actions such as flying and pecking. Superordinate categories do not have such well-defined behavioral patterns. For instance, TOOL and ANIMAL do not have as clear-cut behaviors. Perhaps one could say 'used for building' for TOOL or 'consumes food' for ANIMAL; however, these are quite vague.

While such principles may describe what characterizes the basic level, one might still wonder why the basic level is so significant for human categorization. The answer is that basic level categories are the most economical with respect to the information that they carry in comparison to other categories (Rosch et al., 1976). In other words, they are the most useful for carving up the world. The authors explain:

> To categorize a stimulus means to consider it, for purposes of that categorization, not only equivalent to other stimuli in the same category but also different from stimuli not in that category. On the one hand, it would appear to the organism's advantage to have as many properties as possible predictable from knowing any one property (which, for humans, includes the important property of the category name), a principle which would lead to formation of large numbers of categories with the finest possible discriminations between categories. On the other hand, one

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[32] It is the most inclusive since the higher-level categories have more members and are, in that respect, more inclusive than lower level categories.

[33] It might be contentious to say BIRD is a basic level category, for perhaps EAGLE, SPARROW, CROW, etc. are better candidates; however, for the purposes of this discussion, I won't give a detailed defense of this point. The most likely account is that BIRD starts out as a basic level category but later becomes less cognitively significant as children further develop their conceptual repertoire in this domain.

purpose of categorization is to reduce the infinite differences among stimuli to behaviorally and cognitively usable proportions. It is to the organism's advantage not to differentiate one stimulus from others when that differentiation is irrelevant for the purposes at hand. The basic level of classification, the primary level at which cuts are made in the environment, appears to result from the combination of these two principles; the basic categorization is the most general and inclusive level at which categories can delineate real-world correlational structures (Rosch et al., 1976, p. 384).

To recapitulate, basic level categories accomplish their usefulness by (a) maximizing "the number of attributes shared by members of the category" but at the same time (b) minimizing "the number of attributes shared with members of other categories" (Taylor, 2003, p. 52). This can be seen by considering that the higher up one climbs in the taxonomy, the fewer the attributes that are shared among members. For example, members of HAMMER share more attributes in common (with respect to form, parts, and functions) than members of TOOL. The reverse is true the lower one goes: members of BALLPEEN share more attributes than members of HAMMER. However, the lower one climbs, the more overlapping attributes there will be with other categories. For instance, members of BALLPEEN and MALLET will significantly overlap in their attributes, whereas members of HAMMER, SCREWDRIVER, SAW, etc. have far fewer properties in common.

Carving the world up this way is useful for drawing inferences about objects. To borrow an example from Taylor (2003, p. 52), "if we know that an entity is feathered, has wings, and can fly, we can state with some confidence that it also lays eggs". To put all of this discussion in frame semantics lingo, once the frame has been activated for an object, one has access to all the structures of expectation. At the higher levels, although the frames are maximally distinct with respect to their attribute-value sets, the frame is not well fleshed out. Thus, if one spotted an object and categorized it as, say, ANIMAL, one could only draw a limited number of inferences compared to lower taxonomic levels, such as BIRD. On the other hand, while the rock-bottom levels of the taxonomy will always have the maximum number of attribute-value sets, such fine-grained distinctions have a high cognitive load which is not always worth it since (a) the differences may be irrelevant and (b) there will be many overlapping attributes (meaning the object cannot necessarily be put in one category or another based on that attribute alone). To return to Taylor's bird example, if, when out for a walk, I spot a new thing in my environment and notice that it has wings and beak, I can put this thing in the category BIRD with confidence and activate all the

corresponding structures of expectations. With these features alone, I might not be able to confidently say whether it is a SPARROW or a FINCH; however, for the purposes of my leisurely walk, this fine-grained distinction is not necessary.[34]

3.5.3 The Basic Level and Genres

I will now apply the concept of basic levels to genres and situate the PHILOSOHPICAL RESEARCH ARTICLE within a discourse type taxonomy build around the concept of basic levels. The first question that arises is, what is the basic level for complex communicative events? A preliminary answer is that this level is characterized by the "folk-typology of genres", which according to Biber (1989) includes categories such as NEWSPAPER ARTICLE, ACADEMIC ARTICLE, NOVEL, and PUBLIC SPEECH. One could add the categories BLOG, PODCAST, SERMON, etc. These are good candidates for the basic level since they maximize the number of shared attributes for in-category members and minimize the number of attributes shared with other categories. For example, these categories all have attributes that are quite distinctive markers. This often occurs with respect to the COMMUNICATIVE PURPOSE attribute, but it is also common in regard to key situational aspects, such as the PRODUCTION CIRCUMSTANCES and SETTING as well as the document design (the use of headings, the organization of the text, etc.). For example, the NEWSPAPER ARTICLE can be characterized as being informative while the ACADEMIC ARTICLE is argumentative; the NEWSPAPER ARTICLE and ACADEMIC ARTICLE have quite distinctive layouts; etc.

To further test whether such categories occur at the basic level, let us apply the principles from above:

1. Highest level with similar shape and visual image: The best candidates for the visual image are either the document design (in the case of written communication) or the communicative setting (for verbal communication). In either case, a prototypical visual image can be formed. For instance, with NOVEL, one might picture a book. For typologies that are more coarse-grained, it is harder to conjure up an image. For instance, for the text types NARRATION or INSTRUCTION, what image comes to mind?

2. Highest level with typical parts: This aspect is best understood as the discourse structure. In some categories noted above, this is perhaps more well-defined than others;

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[34] Of course, there are numerous contexts where making fine-grained distinctions is essential, e.g., if one is a birdwatcher or a hunter. The point is that drawing such distinctions will require an additional cognitive load and that finer and finer cuts make the categories more and more alike.

however, it is arguably present in each. For NOVEL, this would include chapters as well as major plot developments, such as some kind of opening with a sketch of the character and settings, various plot building events, a climax, and a conclusion, etc. Again, for higher level categorization schemes, typical parts are hard to come by. For instance, what are the typical parts of INSTRUCTION? It would seem we need a lower level category, like RECIPE or SERMON, to form a clear set of expectations.

3. Highest level with typical actions and interactions: This is best understood as the social action the genre is used to carry out; however, it can also include the activity of the author (both the cognitive act as well as the physical activity, whether writing or speaking) as well as how the audience and author interact. Such patterns seem present for the above examples. For a NOVEL, the audience typically reads for the purpose of entertainment or aesthetic pleasure. The author is engaged in the act of narrating. For categories like NARRATION or INSTRUCTION, there are typical perlocutionary and illocutionary aspects; however, audience-author interactions are vague and under-defined.

These cursory remarks suggest the above categories are good candidates for the basic level. But what significance does this hold for a genre theory and for this dissertation? First, a taxonomy of discourse types (or "genres" in the broad sense of the term) could use this as a starting point for fleshing out the rest of the taxonomy. Admittedly, this could be a bit messy since the taxonomy does not begin at the most general levels with a minimum number of criteria used to deduce the categories nor does it attempt to begin from the most specific levels and build up; rather, the starting point is the mid-sized folk taxonomic categories. The advantage of this approach, however, is that it makes use of the intricate infrastructure that humans already bring to the table. Furthermore, the more one examines the basic level categories (and the human capability of categorizing in general), the more one may appreciate the sophisticated and economical way in which the world is carved up. In other words, "don't reinvent the wheel". What's more, when the hypernyms and hyponyms of the taxonomy are fleshed out, one can apply criteria to make principled decisions (e.g., COMMUNICATIVE PURPOSE can be used to draw key distinctions), affording this approach many of the advantages of those that start from the top.

Second, using basic categories as a reference point helps to bring clarity to what ESP genre research is uncovering. It seems clear that ESP genre analysis mostly investigates categories somewhere below the basic level, namely, those recognized by the expert community in question (Swales, 1990). Experts in a particular domain will bring more nuances and distinctions to the table than the 'folk' not just in regard to the subject matter in question but also in regard to the types of communication that are used. Because ESP research is concerned with analyzing English

in specialized domains, these analyses typically focus on such fine-grained categories recognized by the expert communities (rather than bringing their own categorization scheme to the table).

Finally, this helps to answer the question of where the PHILOSOPHICAL RESEARCH ARTICLE falls within the broader taxonomy: it is a hyponym for a basic level category. The basic level category for this hyponym is the RESEARCH ARTICLE.

3.6 Conclusion

This chapter has advanced a cognitive theory of genre grounded in key semantic concepts, including *frames*, *illocution, perlocution, prototypicality,* and *basic level*. This grounding is important for several reasons. Most outstanding, it provides the background against which genre analysis research is carried out. For instance, in analyzing the typical discourse moves of a genre, the genre analyst is taking an empirical approach to investigating a discourse frame. Applied to this dissertation, this means the experts of the philosophical research community have a frame (a set of structures of expectation) regarding what a philosophical research article will look like. By systematically analyzing this genre, the genre analyst can confirm or disconfirm and help to make these structures explicit to the community.

The framework advanced in this chapter will also provide a firmer foundation for move-analysis methodology. As was noted above, the distinction between the perlocutionary and illocutionary aspect of COMMUNICATIVE PURPOSE not only applies to the text as a whole but also to various discourse moves made in the text. It is thus important for move analysis researchers to clearly distinguish between whether they are attempting to capture the overall cognitive function being carried out in the move or whether they are attempting to discern the ways in which the move attempts to interact and influence the audience. This issue will be revisited in chapter 5.

Finally, this grounding helps to situate complex communicative events more broadly within the human ability to categorize. This shows that concepts related to language are not fundamentally distinct from other concepts: They too can be understood as frames; they too show prototypicality effects; and they too appear to have a basic level of categorization.

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CHAPTER 4 : LITERATURE REVIEW

There are several methods for carrying out a genre analysis. Table 4.1, based upon Tardy and Swales (2014), provides an overview of these approaches.

Table 4.1. Approaches to genre analysis (Tardy & Swales, 2014)

Method	Description
Text Analysis	An analysis and identification of lexico-grammatical characteristics of texts, e.g., lexical bundles and verb tense.
Move Analysis	An analysis and identification of rhetorical moves and steps, e.g., Swale's *Create a Research Space* (CARS) model.
Comparative Analysis	A comparison of textual or rhetorical features within a single genre, e.g., different L1 backgrounds and different disciplinary communities.
Diachronic Analysis	An analysis of changes that genre undergone through time, e.g., changes in grammatical characteristics of scientific texts.
Genre System Analysis	An analysis of inter-related genres that constitute a genre network, e.g., relations between the conference proposal, conference presentation, and research paper.
Critical Genre Analysis	An analysis of the social and political aspects of genres, e.g., how genres can reinforce social structures.

This dissertation will predominately draw upon the move analysis approach; however, it will also use textual analysis as well as comparative analysis. Accordingly, the first part of this literature review will focus upon analyzing and synthesizing move analysis research, especially research that pertains to the RESEARCH ARTICLE (RA) genre. Part 1 will also examine linguistic-focused move analysis research, which, combined with techniques in corpus linguistics, has become a popular approach over the past decade. Part 1 will discuss generalizations, limitations, and gaps in move analysis research on RAs. In part 2, the chapter will review the extant research on philosophical discourse (move analysis or otherwise). Part 2 will argue that further discourse-based research on philosophical writing is warranted and could yield interesting insights.

4.1. Move Analysis Research

The application of Swalesian move-analysis to investigate academic discourse came into fruition during the late 1980s and early 1990s. Early studies focused on the RESEARCH ARTICLE genre, with many focusing on a single section of the research article (e.g., Brett, 1994; Hopkins & Dudley-Evans, 1988; Salager-Meyer, 1992; Swales, 1990). The decades since have witnessed enormous growth in move analysis research. First, research has moved beyond the RESEARCH ARTICLE, with examinations of academic genres such as the GRANT PROPOSAL (Connor, 2000; Connor & Mauranen, 1999), CONFERENCE PROPSOAL (Halleck & Connor, 2006), CONFERENCE ABSTRACT (Yoon & Casal, 2020), LETTER OF APPLICATION (Ding, 2007; Henry & Roseberry, 2001), UNIVERSITY LECTURE (Lee, 2009; Thompson, 1994), and UNIVERSITY TEXTBOOK (Parodi, 2010). There has also been growth beyond academic discourse, with business genres such as the WHITE PAPER (Campbell & Naidoo, 2017), FUNDRAISING LETTER (Bhatia, 1998), COMPANY AUDIT REPORT (Flowerdew & Wan, 2010), and DIRECT MAIL LETTER (Upton, 2002) being investigated. Finally, student writing has also been extensively investigated, including the DISSERTATION (Bunton, 2005; Kwan, 2006; Li et al., 2020), MASTER THESIS, (Peters, 2011; Samraj, 2008, 2014), and UNDERGRADUATE ESSAY (Ädel, 2014).

Nonetheless, the RESEARCH ARTICLE has remained the focus of move analysis research. This is understandable since, on one hand, the RA is one of the most complex and arguably the most important professional genre that graduate students and professionals need to master. The findings of genre analysis research can help both students and nascent professionals improve their ability to read and write in this genre, which, as Moreno and Swales (2018) note, was "Swales' original motivation for developing this text analytical scheme" (p. 40). This focus is also motivated by the internationalization of higher education, which has resulted in pressure upon L2 academic researchers to publish in high-ranking English journals (Li & Flowerdew, 2009). Move analysis research can help uncover discoursal and linguistic patterns that can help students and professionals alike make informed rhetorical decisions that could make-or-break in terms of getting published.

Because of the importance of the RA and because the RA is the focus of this dissertation, this section will provide an overview of move analysis research on the RA genre. Three broad areas of research will be discussed: (a) move-analysis research on RA sections; (b) move-analysis

research on academic disciplines; and (c) move-analysis research focused on linguistic characteristics of moves.

4.1.1 Move Analysis and RA Sections

Research on distinct RA sections has been one of the predominant focal points for move analysis. While a handful of studies have analyzed the entire discourse structure of the RA (e.g., Cotos et al., 2015; Kanoksilapatham, 2005; Nwogu, 1997; Posteguillo, 1999), this tends to be a large undertaking, especially when researchers aim to conduct cross-disciplinary research. Furthermore, because many RAs employ an IMRD structure, this makes the genre amenable to examinations of individual sections. Below, findings pertaining to the major sections of the RA will be explored and discussed, including (a) the introduction, (b) methods, (c) results, and (d) discussion section. An overview of move analysis studies by RA section is provided in Table 4.2 below.

Table 4.2. Overview of Move Analysis Research by RA Section

RA Section(s) Examined	Studies
Abstract	Ayers (2008); Hyland (2004); Jiang & Hyland (2017); Lorés (2004); Martín (2003); Omidian et al. (2018); Pho (2008); Salager-Meyer (1992); Samraj (2014b); Santos (1996); Stotesbury (2003); Tanko (2017); Van Bonn and Swales (2007);
Introduction	Anthony (1999); Chang & Kuo (2011); Cortes (2013); Del Saz Rubio (2011); Durrant & Mathews-Aydınlı (2011); Fakhri (2004); Kanoksilapatham (2012); Kwan et. al (2012); Lim (2012); Loi (2010); Loi & Evans (2010); Lu et al. (2020); Martín & Pérez (2014); Ozturk (2007); Samraj (2002); Shehzad (2008, 2010); Sheldon (2011); Swales (1990); Swales & Najjar (1987); Tucker (2003); Wang & Yang (2015);
Methods	Arsyad (2013); Cotos et al. (2017); Lim (2006); Peacock (2011)
Results	Brett (1994); Lim (2010); Williams (1999)
Discussion	Basturkmen (2009, 2012); Berkenkotter & Huckin (1995); Cotos et al. (2016); Hashemi & Moghaddam (2019); Hopkins & Dudley-Evans (1988); Holmes (1997); Le & Harrington (2015); Moreno & Swales (2018); Peacock (2002)
Entire RA or multiple sections	Chang & Kuo (2011); Cotos et al. (2015); Graves et al. (2013); Gray et al. (2020); Kanoksilapatham (2005, 2015); Li & Ge (2009); Maswana et al. (2015); Nwogu (1997); Posteguillo (1999); Samraj (2005); Tessuto (2015); Yang and Allison (2003); Zhang et al. (2010, 2011)

Before examining this research in more detail, a few limitations and caveats should be noted. First, the table includes the abstract as a section of the RA; however, sometimes the abstract is considered a genre of its own (Jiang & Hyland, 2017). For the purposes of this review, the abstract has been included as part of the RA, but to limit the scope of the review, this part will not be discussed. In addition, only studies that focused on distinct RA sections were included in the corresponding sections in the table. For example, for a study to be classified in the "introduction" category, it needed to focus solely on the introduction of the RA. If a work focused on multiple sections, it was not included in the "introduction" category, even if it analyzed the introduction as part of its broader work. Another limitation of this review is that studies of generic types of moves or steps not limited to a specific RA section were excluded. For instance, Dahl (2008, 2009) examined how researchers present new knowledge claims; however, this specific rhetorical device can appear in multiple parts of the RA and is thus not included in the review.

Two other points are worth noting: First, articles primarily aimed at pedagogical (e.g., Chang & Kuo, 2011; Cotos et al., 2016) or methodological and theoretical goals (e.g., Cotos et al., 2015; Moreno & Swales, 2018) were included if they discussed original research that used move analysis. Finally, studies that did not specifically draw upon move analysis as a methodology were not included, despite the fact that there are alternative types of discourse analysis that are quite similar. For instance, Bruce (2008a, 2008b, 2009) uses the theoretical construct *cognitive genre* to derive a methodology of discourse analysis that is similar yet distinct from the Swalesian move analysis approach (see Chapter 3 for a review of this construct).

4.1.1.1 RA Introductions

In addition to discussion sections, RA introductions have received the most amount of focused research attention. This is most likely due to the fact that introductions are rhetorically challenging and difficult to write, for they "present the writer with an unnerving wealth of options…" (Swales, 1990, p. 137). Much of the research on RA introductions has followed Swales' (1990; 2004) *create a research space* (CARS) model (e.g., Kanoksilapatham, 2012; Loi, 2010; Ozturk, 2007). The original model, shown in Table 4.3 below, contains three moves, each with multiple steps. Due to challenges raised against the original model (Anthony, 1999; Samraj, 2002), Swales (2004) developed a revised model, shown in Table 4.4.

In both models, the first move, *establishing a territory*, involves providing background information that will serve as the broader context for the focus of the research study. As can be seen the tables, the revised model reduced the number of steps made in the opening move, mostly on grounds that clearly demarcating between the steps was difficult. The second move, *establishing a niche*, calls attention to some specific aspect of the territory that needs further attention, either due to a lack of extant research (*indicating a gap*) or by building on existing research (*adding to what is known*). Once again, in the revised model, the number of steps was reduced due to difficulties in demarcation. The final move, *occupying the niche*, is when the writer makes clear what the current research project will address. For this move, Swales added several steps in his revised model to account for nuances that could be made, such as *stating the value of the present research* and *summarizing methods*.

Table 4.3. Swales' (1990) CARS framework

Move and Step	Description
Move 1	**Establishing a territory**
Step 1	Claiming centrality
	and/or
Step 2	Making topic generalizations
	and/or
Step 3	Reviewing items of previous research
Move 2	**Establishing a niche**
Step 1A	Counter-claiming
	or
Step 1B	Indicating a gap
	or
Step 1C	Question-raising
	or
Step 1D	Continuing a tradition
Move 3	**Occupying the niche**
Step 1A	Outlining purposes
	or
Step 1B	Announcing present research
Step 2	Announcing principal findings
Step 3	Indicating RA structure

Table 4.4. Swales' (2004) updated CARS framework

Move and Step	Description
Move 1	**Establishing a territory**
Step 1	Topic generalizations of increasing specificity
Move 2	**Establishing a niche**
Step 1A	Indicating a gap
	or
Step 1B	Adding to what is known
Step 2	Presenting positive justification (optional)
Move 3	**Occupying the niche**
Step 1	Announcing present research (obligatory)
Step 2	Presenting research questions or hypotheses (optional)
Step 3	Definitional clarifications (optional)
Step 4	Summarizing methods (optional)
Step 5	Announcing principle outcomes (probable in some fields)
Step 6	Stating the value of the present research (probable in some fields)
Step 7	Outlining the structure of the paper (probable in some fields).

While the models above have served as the predominate guides for analyzing RA introductions, most research has made adjustments at the step level to account for disciplinary differences. For instance, Kanoksilapatham (2012, 2015) added two steps to Swales' revised version of Move 3 when analyzing engineering RAs (*describing study sites* and *suggesting future research*), and Loi (2010) added two steps to Move 1 when analyzing RAs in educational psychology (*defining terms/concepts* and *presenting the theoretical basis*).

One the predominant research trends in this area has been a narrowing of the research focus to either single moves or single steps (Lim, 2012; Shehzad, 2008, 2010; Wang & Yang, 2015). In large part, the motivation behind this narrowed focus is that it allows researchers to pay attention to linguistic devices and specific rhetorical functions carried out in conjunction with moves and steps. Shehzad (2008) and Lim (2012), for instance, conducted focused analyses of Move 2, the former with respect to computer science RAs and the latter, management RAs. In both cases, the researchers paid attention to linguistic characteristics of the move. At the step level, Wang and Yang (2015) examined Move 1 Step 1 from Swales' original model, analyzing the rhetorical appeals used to *claim centrality* in RAs in applied linguistics. Finally, using Swales' revised model, Shehzad (2010) analyzed Steps 5 and 6 of Move 3 for RAs in computer science, focusing on the value-laden nature of the statements made by researchers as well as specific lexical items used to accomplish this step, such as "contribution", "novel", etc.

Another research trend has been comparative in nature: Several studies have examined RA introduction variation across disciplines (interdisciplinary) and research paradigms (intradisciplinary) (Cortes, 2013; Kanoksilapatham, 2012; Kanoksilapatham, 2015; Kwan et al., 2012; Ozturk, 2007; Samraj, 2002). These studies have showed both variation and consistency in the use of moves and steps. Cortes (2013), for example, identified lexical bundles used in conjunction with moves and steps across 13 disciplines and discovered that certain lexical bundles are used across disciplines to initiate certain steps. On the other hand, despite the fact that one might expect a large degree of homogeneity within disciplines, several studies have shown variation, particularly at the level of the step. Samraj (2002), for instance, compared RA introductions in wildlife behavior and conservation biology. While both sub-disciplines made similar moves, there were notable differences in how frequently certain steps were used. As just one example, the wildlife behavior articles made notably fewer centrality claims than conservation biology. There were also steps almost exclusively used by only one sub-discipline: A majority of wildlife behavior articles gave background information on the species or site in the course of Move 3, while this only happened in a single article in the conservation biology corpus. Variation at the step level was also found by Kanoksilapatham (2012, 2015), analyzing three subdisciplines of engineering (civil, software, and biomedical). Once again, the use of centrality claims (Step 1, Move 1) showed variation, as did several steps in Move 3. For example, outlining the article structure (Step 5, Move 3) occurred in half of the software engineering RAs, while this step only occurred in 10% of the biomedical engineering articles. Commenting on this difference, Kanoksilapatham noted that it may be due the fact that software engineering is a relatively new field, and thus does not have firmly established conventions for organizing an article. It may also suggest that the audience values having a guide to help them quickly locate information. Finally, Ozturk (2007) examined intradisciplinary variation along a separate parameter: move sequences (i.e., the order in which rhetorical moves are carried out). Analyzing and comparing RAs from the *Journal of Second Language Writing* (JSLW) and *Studies in Second Language Acquisition* (SSLA), the study found differences in move sequence patterns. The most frequent pattern in SSLA was Move order 1-2-3 (60% of the articles), which was only used by 10% of JSLW articles. On the other hand, the preferred sequence in JSLW was Move order 1-2-1-3 (occurring in 40% of the articles), which did not occur in SSLA.

One final research trend with respect to RA introductions has been to examine cross-cultural and cross-linguistic differences (Fakhri, 2004; Loi, 2010; Loi & Evans, 2010; Sheldon, 2011). This area of research has shown both similarities in how RA introductions are constructed as well as differences. Loi (2010) and Loi and Evans (2010), for example, found that Chinese L1 writers in the field of educational psychology showed similar preferences for using Moves 1, 2, and 3 in their RA introductions as L1 English writers; however, notable differences were observed at the step level. For instance, 75% of English RA introductions used a step *introducing the research hypothesis*, while this step was not used in any of the Chinese RAs (Loi & Evans, 2010). Sheldon (2011), comparing L1 Spanish, L1 English, and L2 English writers in linguistics, also found similar rhetorical preferences at the move level, with more variation at the step level. Furthermore, the study examined different move-cycles across the language groups, finding that L1 English writers (44%) more frequently employed a Move 1-2-1-2 cycle than L1 Spanish (11%) and L2 English (22%). The aforementioned studies stand in contrast to Fakhri (2004), who found that only 39% of RA introductions written for an Arabic journal publishing on socio-cultural issues contained all three rhetorical moves in Swales' model. One caveat with this finding, however, is that the subject matter may in part explain some of this variation: The journal was not discipline specific and published on a wide range of issues.

In conclusion, research on RA introductions has validated Swales' (1990; 2004) three-move model across a wide range of disciplines; however, at the step level, there is considerable variation, both across disciplines and within. A notable gap in this area is the lack of research on articles that do not follow IMRD formats. Thus, while the three-move analysis appears to be an effective model for understanding the structure of RA introductions in many disciplines in the social and natural sciences, it is not clear whether this discourse structure is also present in RAs in the humanities as well as RAs in the social and natural sciences that are not organized using IMRD formats (e.g., theoretical articles and some qualitative research paradigms). In fact, some research on introductions written by graduate students in the field of philosophy (e.g., Peters, 2011; Samraj, 2008) suggests that there may be interesting differences to uncover. A final point worth noting is that there has been increased attention paid to what I have referred to in Chapter 3 as the *perlocutionary* aspect of moves and steps (e.g., Lim, 2012; Wang & Yang, 2015). This emphasis occurs in research that aims to explain the *why* behind the rhetorical functions. This speaks to the

importance of drawing a clear distinction between the *perlocutionary* and *illocutionary* aspects of moves, a subject which will be taken up in Chapter 5.

4.1.1.2 RA Methods Sections

Compared to move analysis studies of RA introductions, methods sections have received little focused attention. In part, this may be because it is difficult for non-experts to carry out discourse analyses of such content, which heavily relies upon disciplinary knowledge (Cotos et al., 2017). In addition, it may be that methods sections are viewed as highly formulaic and, consequently, present writers with fewer difficult rhetorical decisions. For researchers concerned with pedagogical implications, this might lead to the conclusion that methods sections warrant less attention than other more rhetorically challenging sections of the RA. However, this view is disputed. Lim (2006), for instance, argues that methods sections have several important rhetorical aims, as they help writers "to strengthen the credibility of their findings…, to stifle potential criticisms, to avoid expected challenges to their research designs, and to ward off possible doubts about their results and related interpretations" (p. 284). Using the framework developed in Chapter 3, one could draw a distinction here between the illocutionary aspects of this section, which are more overt and straightforward (e.g., describing a dataset, describing a method of analysis, recounting the process of analysis), and the perlocutionary aspects (e.g., strengthening credibility, warding off doubts, etc.).

Several models of the methods section have been developed and put forth both in studies of the methods section in isolation (Cotos et al., 2017; Lim, 2006; Peacock, 2011) and as part of more comprehensive analyses of the RA (Kanoksilapatham, 2005, 2015; Nwogu, 1997). The majority of studies have posited a three-move model (Cotos et al., 2017; Lim, 2006; Nwogu, 1997); however, Peacock (2011) developed a seven-move model. An overview of these models can be seen in Table 4.4 below.

Table 4.5. Move Frameworks for Methods Sections

Study	Methods move sequence
Nwogu (1997)	Move 1: Describe data collection procedure
	Move 2: Describe experimental procedure
	Move 3: Describe data-analysis procedure
Kanoksilapatham (2005)	Move 1: Describing materials
	Move 2: Describing experimental procedures
	Move 3: Detailing equipment
	Move 4: Describing statistical procedures
Lim (2006)	Move 1: Describe data collection procedure/s
	Move 2: Delineate procedure/s for measuring variables
	Move 3: Elucidate data analysis procedure/s
Peacock (2011)	Move 1: Overview (of research method)
	Move 2: Research aims/questions/hypotheses
	Move 3: Subjects/materials
	Move 4: Location (research cite)
	Move 5: Procedure (data collection)
	Move 6: Limitations
	Move 7: Data analysis
Kanoksilapatham (2015)	Move 1: Describing procedures
	Move 2: Featuring other methodological issues
	Move 3: Reporting and consolidating findings
Cotos et al. (2017)	Move 1: Contextualizing study methods
	Move 2: Describing the study
	Move 3: Establishing credibility

As can be seen from the table, unlike RA introductions, researchers have posited quite distinctive move frameworks for methods sections. This variation may be attributable to three factors, two of which are important methodological considerations for move analysis. First, the models differ depending on the *granularity* of moves and steps. While the three-move models (Cotos et al., 2017; Lim, 2006; Nwogu, 1997) are quite coarse-grained, Peacock (2011) took a more fine-grained approach. This does not imply that coarse-grained approaches overlook rhetorical functions in fine-grained approaches; rather, the moves in a fine-grained approach are often labeled as steps in a coarse-grained approach. For example, Move 3 (*subjects/materials*) and Move 4 (*location*) in Peacock's (2011) study were identified as Move 1 Step 4 (*describing the setting*) and Move 1 Step 5 (*introducing subjects/participants*) by Cotos et al. (2017) and as Move 1 Step 1a (*describing the location of the sample*) and Move 1 Steps 1b and 1c (*describing sample*

size and sample characteristics, respectively) by Lim (2006). The importance of determining granularity size will be discussed in more detail in Chapter 5.

A second factor is that the authors appear to operationalize moves along different parameters. The two most prominent parameters are perlocutionary and illocutionary aspects (described in Chapter 3). Lim (2006), for example, appears to primarily identify moves and steps based upon their illocutionary aspect, namely, *describing*, *delineating*, and *elucidating*. This is similar to Nwogu (1997), who simply labeled all the moves as carrying out the function of *describing*. Cotos et al. (2017), on the other hand, used a blend of perlocutionary and illocutionary aspects of moves for building their model. For instance, while Move 2 is centrally identified as *describing* (an illocutionary description), Move 3 is identified as *building credibility*, which is a form of persuasion (a perlocutionary aspect). The other important parameter used to operationalize moves is the content or subject matter that the move addresses. Interestingly, Peacock (2011) simply uses content descriptions to identify the moves without providing labels that speak to the cognitive acts (illocutions) or aims (perlocutions) of the writers (e.g., *subjects and materials* and *location*).

A final factor that may explain differences between the models is that some studies examined a single discipline (Kanoksilapatham, 2005; Lim, 2006; Nwogu, 1997)[35] while others examined multiple disciplines (Arsyad, 2013; Cotos et al., 2017; Peacock, 2011). Similar to RA introductions, variation was found across disciplines; however, for methods sections, this occurred both at the step and move level. At the move level, for instance, Peacock (2011) found that Move 6 (*limitations*) was extremely rare in disciplines such as biology, chemistry and physics; however, it occurred more frequently (in more than 25% of RAs) in business and law. In addition, Peacock found that some moves were completely absent from disciplines. For instance, physics RAs did not include Move 4 (*location*). This variation can also be seen in the different models posited by Kanoksilapatham (2005, 2015). As can be seen in Table 4.5, the move analysis model for biochemistry (Kanoksilapatham, 2005) differs from the model for engineering (Kanoksilapatham, 2015). Most outstanding, engineering RAs often report findings in the methods sections (Move 3). This move was not included in Kanoksilapatham's earlier model for biochemistry RAs.

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[35] Lim (2006b) examined RAs in management, Nwogu (1997) examined medical research papers, and Kanoksilapatham (2005a) examined biochemistry.

There may be several underlying factors explaining variation across disciplines, not the least of which is the codification of disciplinary conventions. Such conventions may come to be for a variety of reasons; however, two possible explanations stand out. First, in some cases, a move may simply be unnecessary given the subject matter and methodological approaches of a discipline. For instance, Peacock's (2011) finding that physics RAs do not include Move 4 (*location*) probably does not come as a surprise since locations (e.g., whether one is in Lafayette, Indiana or Beijing, China) are not usually relevant to the types of inquiries the physicist is concerned with. A perhaps more interesting explanatory factor is that some methodological approaches and procedures may require more explanations, clarifications, and justifications than others. In disciplines with multiple competing methodologies, it would seem that more explanations, clarifications, and justifications would be required, while less would be so for those with a greater amount of homogeneity. Swales and Feak (2012) refer to the former as *extended* methods sections and the latter as *condensed*.

4.1.1.3. Results Sections

Results sections have also received comparatively less attention than introductions and discussions. Only a handful of move analysis studies have specifically targeted the results section in isolation (Brett, 1994; Lim, 2010; Williams, 1999); however, this section has been studied as part of broader works examining either the entire RA structure (Cotos et al., 2015; Kanoksilapatham, 2005, 2015; Nwogu, 1997; Posteguillo, 1999) or multiple RA sections, such as results-discussion-conclusion (Yang & Allison, 2003). The reason for the lack of focused attention is unclear. In part, this may be due to the fact that descriptions of results are not always placed in a standalone section; rather, they are often conjoined with other discourse functions, such as discussions of results (Yang & Allison, 2003). This blending of discourse functions is reflected in differing titles that authors may use for sections that report on results, e.g., "results and discussion". This can make it challenging to isolate results sections for study.

Nonetheless, several studies have targeted results sections. One of the first systematic move analyses studies of this section was carried out by Brett (1994), whose model was used in subsequent studies, such as Williams (1999) and Lim (2010). Brett's model can be seen in Table 4.6 below. The model consists of three major moves: (1) *metatextual*, where the author either points to data in a table or chart or directs the reader to other parts of the text (e.g., "see section 1 for an overview"); (2) *presentational*, where the author characterizes specific results (this can also

include steps such as *restating the hypothesis* and *explaining how and why the data was produced*); and (3) *comment*, where the author provides evaluations for their results, compares their results with other studies, and considers implications of their work.[36]

Table 4.6. Move Frameworks for Results Sections

Study	Methods move sequence
Brett (1994)	Move 1: Metatextual – refer to data in visuals or other parts of the article
	Move 2: Presentational – refer to results
	Move 3: Comment – offer judgement, interpretation, or opinion
Nwogu (1997)	Move 1: Describe consistent observations
	Move 2: Describe inconsistent observations
Yang and Allison (2003)	Move 1: Preparatory information
	Move 2: Reporting results
	Move 3: Commenting on results
	Move 4: Summarizing results
	Move 5: Evaluating the study
	Move 6: Deductions from research
Kanoksilapatham (2005)	Move 1: Stating procedures
	Move 2: Justifying procedures or methodology
	Move 3: Stating results
	Move 4: Stating comments on the results
Kanoksilapatham (2015)	Move 1: Summarizing procedures
	Move 2: Reporting results
	Move 3: Commenting results
Cotos et al. (2015)	Move 1: Approaching the niche
	Move 2: Occupying the niche
	Move 3: Construing the niche
	Move 4: Expanding the niche

As with methods sections, there have also been distinctive frameworks posited for results sections, which can be seen in Table 4.6. The move found consistently across the models—and the only one which is usually considered *obligatory*[37] for results sections—is a description of the

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[36] It is interesting to note that the functions in Brett's tripartite model seem closely related to the metafunctions of language identified by Halliday (Halliday & Matthiessen, 2004). The metatextual is related to the textual function (it links together and helps to build cohesion and coherence in the discourse); the presentational is related to the ideational (it describes the results of the findings, which is about the world); and the comment categories are related to the interpersonal (the author expresses their attitudes by offering evaluations).

[37] "Obligatory" typically either means that the function occurs in 100% of the RAs analyzed or some very high percentage (e.g., 90%). This issue will be discussed in more detail in Chapter 5.

results (Brett's *presentational* category). Most models also either include a *comment* move or a range of moves that roughly match the steps identified by Brett (1994) as falling under the *comment* category (e.g., explaining results, interpreting results, and evaluating results). The most notable development to have occurred since Brett's (1994) model has been a restructuring of the *metatextual* category. More recent models (e.g., Cotos et al., 2015; Kanoksilapatham, 2015) posit an initial move that summarizes and/or justifies procedures used in the study. Unlike Brett's model, this move does not contain a *pointer* step that involves referring to data in tables and figures.

Another finding that emerges when considering the different frameworks is that, overall, most posit similar functions. The difference, then, between the frameworks lies not so much in their identifying different functions (although this does account for some variation), but rather in the granularity size used for moves and steps and in how steps and sub-steps are grouped together into moves. For instance, in Nwogu's (1997) model, Move 1 (*indicating consistent observation*) includes the step *accounting for observations made*, which is a type of commentary that an author gives on a result. Thus, although Nwogu's model appears to not have any move corresponding to Brett's (1994) *comment* category, it does include a comment-type function under a different overarching category. Once again, this speaks to an important methodological concern with move analysis, which will be addressed in the following chapter.

Two other general findings about results sections are worth highlighting. First, across several disciplines, it was found that results sections do not merely function as a textual space for reporting findings: They are also a place where authors give commentary, such as providing evaluations, explanations, and comparisons for their results (e.g., Brett, 1994; Cotos et al., 2015; Kanoksilapatham, 2015; Williams, 1999). Cotos et al. (2015), for instance, found that commentary functions (which they label as *construing the niche*) account for roughly 14% of all moves in results sections across 30 disciplines. Furthermore, although the amount of space dedicated to giving commentary may be substantially less than reporting results—e.g., Cotos et al. (2015) found the reporting of results comprise 61% of all results moves—giving commentary is commonly a conventional function found in most research articles. For example, Kanoksilpatham (2015) found that in civil engineering, software engineering, and biomedical engineering, at least one comment function was used in 94%, 89%, and 88% of the research articles respectively.

Nevertheless, the above finding should be tempered by a second: There is considerable variation across and within disciplines. This finding is consistent with what was noted above in

the introduction and methods sections. Within disciplines, Kanoksilpatham (2015)—examining the three engineering sub-disciplines noted above—found variation at the step level. For instance, in biomedical engineering, more than half (53%) of the research articles included the step *justifying procedures*, while this occurred in only 33% of software engineering RAs and 20% of civil engineering RAs.[38] Across disciplines, there is also variation, mostly at the step level. Lim (2010), for example, analyzed how commentary steps differ across applied linguistics and education and found that these steps were more commonly employed by the former than the latter. For instance, step 2, *expressing views about the findings*, was observed in 8 of 15 RAs in applied linguistics but only 2 of 15 in education. A more comprehensive comparison was carried out by Cotos et al. (2015), examining 30 disciplines (30 RAs for each discipline). The authors found notable interdisciplinary variation to occur in steps used to accomplish moves 3 and 4 (*construing the niche* and *expanding the niche*). For instance, with respect to move 3 (corresponding to Brett's *comment* category), some disciplines focused on *comparing results* (step 1) while others (e.g., chemical engineering and synthetic chemistry) focused more on *accounting for results* (step 2) (e.g., agricultural and biosystems engineering).

4.1.1.4. Discussion Sections

Discussion sections have also received considerable research attention, although less than introductions. This focus is likely due to the fact that these sections are often viewed as being one of the most important of the research article (Basturkmen, 2012) as well as the fact that there is considerable variation in regard to what moves and steps are expected across (and even within) disciplines (Swales & Feak, 2012). Unlike introductions, however, there has been an array of move analysis models posited for this section, which can be seen below in Table 4.7.

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[38] Kanoksilapatham (2015) considers software engineering, civil engineering, and biomedical engineering as sub-disciplines of the larger disciplinary field of engineering; however, this point is disputable. For the author's defense of this position, see p. 77.

Table 4.7. Move Frameworks for Discussion Sections

Study	Methods move sequence
Hopkins and Dudley Evans (1988)	Move 1: Background information
	Move 2: Statement of results
	Move 3: (Un)expected outcome
	Move 4: Reference to previous research
	Move 5: Explanation of unsatisfactory result
	Move 6: Exemplification
	Move 7: Deduction
	Move 8: Hypothesis
	Move 9: Reference to previous research
	Move 10: Recommendation
	Move 11: Justification
Dudley Evans (1994)	Move 1: Information Move
	Move 2: Statement of result
	Move 3: Finding
	Move 4: (Un)expected outcome
	Move 5: Reference to previous research
	Move 6: Explanation
	Move 7: Claim
	Move 8: Limitation
	Move 9: Recommendation
Berkenkotter and Huckin (1995)	Move 1: Occupying the niche
	Move 2: Re-establishing the niche
	Move 3: Establishing additional territory
Holmes (1997)	Move 1: Background information
	Move 2: Statement of result
	Move 3: (Un)expected outcome
	Move 4: Reference to previous research
	Move 5: Explanation of Unsatisfactory Result
	Move 6: Generalization
	Move 7: Recommendation
	Move 8: Outlining parallel or subsequent developments
Peacock (2002)	Move 1: Information move
	Move 2: Finding
	Move 3: Expected or unexpected outcome
	Move 4: Reference to previous research
	Move 5: Explanation
	Move 6: Claim
	Move 7: Limitation
	Move 8: Recommendation

Table 4.7 continued

Yang and Allison (2003)	Move 1: Background information
	Move 2: Reporting Results
	Move 3: Summarizing results
	Move 4: Commenting on results
	Move 5: Summarizing the study
	Move 6: Evaluating the study
	Move 7: Deductions from the research
Kanoksilapatham (2005)	Move 1: Contextualize the study
	Move 2: Consolidate results
	Move 3: State limitations
	Move 4: Suggest future research
Swales and Feak (2012)	Move 1: Background information
	Move 2: Summarizing and reporting key results
	Move 3: Commenting on the key results
	Move 4: Stating limitations of the study
	Move 5: Making recommendations for future research.
Kanoksilapatham (2015)	Move 1: Reviewing present study
	Move 2: Consolidating results
	Move 3: Stating limitations and future research.
Cotos et al. (2015, 2016)	Move 1: Re-establish the territory
	Move 2: Framing new knowledge
	Move 3: Reshaping the territory
	Move 4: Establishing additional territory
Moreno and Swales (2018)	Move 1: Background information
	Move 2: Summarizing or restating key result
	Move 3: Commenting on key results or other features
	Move 4: Evaluating the current study or other research or practice
	Move 5: Drawing implications
	Function Move 1: Announcing function
	Function Move 2: Elaborating
Hashemi and Moghaddam (2019)	Move 1: Study
	Move 2: Results
	Move 3: Discussion
	Move 4: Evaluation
	Move 5: Suggestion

As noted by Moreno and Swales (2018), two general frameworks are popular: Some follow Hopkins and Dudley-Evans (1988), positing a multi-move framework that typically includes moves such as (1) *providing background information about the study*, (2) *(re)stating results from*

the study, (3) *commenting on results (*e.g., *explaining results, comparing results with existing literature, evaluating results)*, (4) *evaluating the study*, and (5) *considering implications of the research* (e.g., Moreno & Swales, 2018; Peacock, 2002; Yang & Allison, 2003). Others follow Swales' (1990) ecological RA introduction model (e.g., Berkenkotter & Huckin, 1995; Cotos et al., 2015, 2016). These models typically posit fewer moves, and the moves are typically characterized by broader textual aims (e.g., *framing new knowledge*, *reshaping the territory*).

The factors that may account for this variation are the same as those noted concerning methods sections above. First, the models were developed in response to a wide range of disciplines, including dentistry (Basturkmen, 2012), engineering (Kanoksilapatham, 2015), applied linguistics (Basturkmen, 2009; Hashemi & Moghaddam, 2019; Yang & Allison, 2003), and agriculture (Hopkins & Dudley-Evans, 1988). Holmes (1997), for example, who investigated discussion sections for history, sociology, and political science, found that Move 8 only occurred in history RAs, which explains the variation of this model compared with others. Second, the studies used different granularity levels, and thus, once again, one model's step is another's move. For instance, Kanokilapatham (2015) includes *reporting results* as a step under the move *consolidating results*, while most models identify *reporting results* as a move. Third, different parameters were used to operationalize and identify moves. This is most evident in the distinction drawn above between the ecological models for move schema and those that follow Hopkins and Dudley-Evans (1988). The latter primarily operationalize moves as a combination of (a) a specific cognitive act (e.g., describing, reporting, evaluating) and (b) the general content of the act (e.g., results, study, recommendations), e.g., *reporting results*, *evaluating the study*, *making recommendations for future research*, etc. On the other hand, the ecological models speak to broader textual purposes rather than specific cognitive acts, e.g., *framing new knowledge* and *re-establishing the niche*.

Particularly because of the different granularity levels used, the models may be more similar than they appear *prima facia*. As Swales and Feak (2012) note, most models identify similar functions. All models, for example, identify *reporting results* as a move or step; they all posit forms of commentary as either moves or steps (e.g., *explaining results*, *comparing results with literature*, *evaluating results*); and they all posit various forms of implications as moves or steps, e.g., *making recommendations for future research* is posited as Move 5 in Swales and Feak (2012) but as Move 4, Step 4 in Cotos et al. (2015, 2016). However, despite sharing deeper

similarities, the surface level differences can lead to conflicting findings and interpretations. For example, Yang and Allison (2003) note that previous research—e.g., Hopkins and Dudley-Evans (1988) and Holmes (1997)—did not find any moves in the discussion section to be obligatory; however, Yang and Allison found that Move 4, *commenting on results*, was obligatory. If Hopkins and Dudley-Evans (1988) and Holmes (1997) had used Yang and Allison's (2003) framework for classifying commenting functions, it appears they would have reached a similar conclusion.

Looking at general research trends in this area, what is notable is that the comment move has received the most focused research attention, with multiple studies solely investigating this move (i.e., Basturkmen, 2009; Le & Harrington, 2015). The reason for this focused attention is twofold: (a) the comment move has been found to be obligatory for discussion sections (e.g., Basturkmen, 2012; Yang & Allison, 2003), and (b) the comment move is "a means by which writers make new knowledge claims" (Basturkmen, 2009, p. 243). This last point is of particular importance: By explaining results, comparing results with the extant literature, and evaluating one's results, one is—as Cotos et al. (2016) would say—*framing new knowledge* and *reshaping the territory*. In other words, these functions allow writers to show how their results should be understood and what they mean when considered within the broader disciplinary dialogue. In addition, while such focused studies have the shortcoming of only investigating a part of the discussion section, they allow researchers to home in on specific aspects of this move, such as the phraseology that is used to implement these moves (Le & Harrington, 2015) as well as specific structures of argumentation that are used (Basturkmen, 2009).

With respect to the findings of these studies, two generalizations are noteworthy: First, as was observed in other sections of the RA, there was variation in the types of moves and steps used across disciplines, particularly at the step level. Basturkmen (2012), for example, notes that in dentistry, three commentary steps (*explaining results*, *comparing results with previous research*, and *evaluating results*) were in near even proportions, while in applied linguistics (Basturkmen, 2009), *explaining results* was used much more frequently. Basturkmen (2012) attempts to explain this finding by arguing that it speaks to differences across fields of inquiry: the social sciences may be more concerned with interpreting findings and arguing that they fit certain theoretical models, while in the physical sciences, these frameworks may already be well established, and thus researchers spend more time comparing their results and evaluating whether the results were reliably arrived at. Large-scale comparative research also supports the claim that there is variation

across disciplines in the discussion section, particularly when comparing fields of study (e.g., physical and social sciences). Peacock (2002), examining the discussion sections of seven disciplines, highlights variation in the number of moves used as well as move cycles. For example, the three physical science disciplines (physics and material science, biology, and environmental science) were found to commonly use a two-move cycle, consisting of (a) *(un)expected outcome* followed by (b) *explanation*, a sequence which was rare in the other four disciplines (business, language and linguistics, public and social administration, and law). Likewise, Cotos et al. (2016) found variation in their large-scale studying examining 30 disciplines. The authors note that steps such as *accounting for results* and *addressing limitations* showed considerable variation across disciplines, with several social science disciplines (e.g., curriculum and instruction, business, and psychology) using the step *addressing limitations* more frequently than the step *accounting for results* (which was in contrast to disciplines in the natural and applied sciences).

A second generalization is that several studies emphasize move cycles used in discussion sections, although the types of cycles used are not consistent across disciplines, as was noted above (Peacock, 2002). Basturkmen (2012), for instance, found that in dentistry, there was average of 3.2 *result-comment* move cycles per RA. Le and Harrington (2015) likewise found that *result-comment* cycles were common in applied linguistics for each of the specific commenting functions: *interpreting results*, *comparing results with literature*, and *accounting for results*. Another common move cycle, identified by Peacock (2002), was a *finding-claim* cycle, in which an author first states a result and then either makes a generalization about the result or indicates its research contribution. Nonetheless, comparisons among move cycles have been challenging due to the different move models.

Before moving one, two potential issues with research on discussion sections should be noted. First, it is difficult to clearly demarcate discussion sections from others such as the results and conclusions since (a) many authors do not use standardized headings and sub-headings that clearly mark these sections and (b) often the language functions that have been identified to be characteristic of discussion sections are not restricted to a section labeled "discussion". In response, researchers can either choose to investigate multiple sections at once, following Yang and Allison (2003), or they must exclude from their study sections that are not strictly "discussion" sections. This was the case, for instance, with Le and Harrington (2015), who excluded sections with hybrid headings (e.g., "results and discussion"). A potential issue with the latter approach is that it may

skew the generalizations being made about how conventional various moves and move-cycles are in discussion sections.

A second issue is also related to how research results may be skewed, in this case, due to how articles are sampled from the disciplines. Multiple studies focus solely on quantitative articles (e.g., Basturkmen, 2009; Le & Harrington, 2015). While this restriction is justified in order to avoid potentially confounding variables, it nonetheless also means that research results cannot be generalized to the disciplines as a whole. Le and Harrington (2015) are aware of this shortcoming and call for future research to explore qualitative and mixed-methods RAs. Their recommendation was partially answered by Hashemi and Moghaddam (2019), who explored mixed-methods RAs in applied linguistics. The results of their study showed that, while there was a large degree of overlap in the kinds of moves and steps used in mixed-methods RAs with others, there were also unique features, such as a step in which authors discuss how their method was novel and significant.

4.1.2 Move Analysis and Disciplines

Move analysis research on academic writing has examined a wide range of academic disciplines in the natural and social sciences. Most of this research has been concentrated on the RESEARCH ARTICLE (RA), although there have been several student studies on the DISSERTATION (e.g., Bunton, 2005; Kwan, 2006; Li et al., 2020), the MASTER THESIS, (e.g., Peters, 2011; Samraj, 2008), and the UNDERGRADUATE ESSAY (e.g., Ädel, 2014). The goal of this section is to review move analysis research on the RA across and within disciplines. This will be done by classifying the research into two broad categories: Studies on single disciplines and studies on multiple disciplines (interdisciplinary).

4.1.2.1 Move Analysis Research on Single Disciplines

Much of the move analysis research on RAs has targeted single disciplines, although for different purposes. Some studies have attempted to describe the generic RA structure of a discipline (e.g., Graves et al., 2013; Kanoksilapatham, 2005; Tessuto, 2015); others have aimed at describing moves or steps of a particular section or sub-section of the RA (reviewed above) (e.g., Basturkmen, 2012; Lim, 2006; Wang & Yang, 2015); finally, others have been comparative in nature, examining either different research paradigms within a discipline (e.g., Kanoksilapatham,

2015; Samraj, 2002) or variation across languages (i.e., contrastive rhetoric) (e.g., Loi, 2010; Loi & Evans, 2010; Sheldon, 2011). Table 4.8 below provides an overview of move analysis research on RAs classified by fields and single disciplines.

Table 4.8. Move Analysis Studies on Research Articles in Single Disciplines

Natural Sciences	Studies
Engineering	Anthony (1999); Chang & Kuo (2011); Kanoksilapatham (2012; 2015); Kwan et al. (2012); Maswana et al. (2015); Posteguillo (1999); Shehzad (2008, 2010)
Physical and Life Sciences	Hopkins & Evans (1988); Kanoksilapatham (2005); Samraj (2002, 2005); Stoller & Robinson (2013)
Medical Sciences	Basturkmen (2012); Li and Ge (2009); Nwogu (1997); Salager-Meyer (1992); Williams (1999);
Agricultural Sciences	Del Saz Rubio (2011)

Social Sciences	Studies
Education	Chang and Schleppegrell (2011); Loi (2010); Loi and Evans (2010)
Applied Linguistics	Basturkmen (2009); Hashemi & Moghaddam (2019); Le & Harrington (2015); Lorés (2004); Ozturk (2007); Sheldon (2011); Van Bonn and Swales (2007); Wang & Yang (2015); Yang and Allison (2003)
Psychology	Zhang et al. (2010, 2011)
Sociology	Brett (1994)
Management	Lim (2006; 2012)
Economics	Dahl (2009)

Others	Studies
Mathematics	Graves et al. (2013)
Law	Tessuto (2015)
Art History	Tucker (2003)
Literature	Tanko (2017)

As can be seen in Table 4.8, a good deal of attention has been paid to RAs in the natural and social sciences, with less attention being paid to disciplines in the humanities. This emphasis is likely due to the pedagogical orientation of much of move analysis research. Indeed, at least in the United States, far more international students enroll in programs in the natural and social

sciences than in the humanities. For example, according to the Institute of International Education (2020), in the academic year 2019-2020, roughly 85,000 international students were pursuing social science degrees and over 220,000 were pursuing degrees in engineering alone, compared to roughly 17,000 seeking degrees in the humanities.

It is also interesting to note that, while research in the natural sciences is well balanced between different fields such as engineering, the medical sciences, and the physical and life sciences, research in the social sciences has predominately occurred in the disciplines of education and applied linguistics, particularly the latter. It would thus seem that applied linguists have been particularly interested in turning the spotlight on themselves and their own discourse practices. The explanation for this may in part lie in the fact that move analysis research on professional academic writing can be quite challenging for non-experts. While language functions can be understood apart from the specific content being conveyed, there is no doubt that a grasp of the content aids the linguist's ability to code for rhetorical moves.

Making generalizations about the rhetorical structure of either the entire RA or an RA section has been the most popular aim of these studies. In regard to the analysis of the entire RA structure, RAs in the following disciplines have been explored: Computer science (Posteguillo, 1999), medical research (Nwogu, 1997), mathematics (Graves et al., 2013), law (Tessuto, 2015), biochemistry (Kanoksilapatham, 2005), engineering (Kanoksilapatham, 2015; Maswana et al., 2015), and psychology (Zhang et al., 2011). Far more popular has been the trend of exploring sub-sections of the research article, reviewed above.

Making comparisons within disciplines and across cultures and languages has been a less common purpose behind this research. In regard to intradisciplinary research, Samraj's (2002) study on conservation and wildlife biology (reviewed above) found interesting differences. In a follow up study in 2005, she compared both introductions and abstracts in these two sub-disciplines (Samraj, 2005). The most notable differences in the two research areas occurred at the step level. As was noted above, wildlife behavior introductions made centrality claims at a lower rate than did those of conservation biology (6 of 12 RAs in wildlife behavior made centrality claims compared to 11 of 12 RAs in conservation biology). Furthermore, to establish a niche, it was found that conservation biologists commonly note a problem in the real world (9 of 12 RAs), while this strategy was not found to be used at all by wildlife behavior biologists. Two other intradiscplinary studies were carried out by Kanoksilapatham (2015) and Maswana et al. (2015) in engineering.

The former examined civil, software, and biomedical engineering while the latter examined structural, environmental, electrical, chemical, and computer engineering. Similar to Samraj's (2005) study, while there was a significant degree of overlap in the macro-move structure of the RAs, there was a greater amount of variation at the step level. For example, Kanoksilapatham (2015) found that only 33% (12 of 36) of software engineering articles used the step *explaining results*, while 80% (28 of 35) of biomedical RAs and 69% (11 of 16) of civil engineering RAs used the step. These differences within disciplines carry important pedagogical implications for genre teaching: While it is possible to make generalizations about the macro structure of RAs in a discipline, instructors must also draw attention to conventional nuances that can occur in different research paradigms and sub-disciplines.

In regard to move analysis research that uses contrastive rhetoric frameworks, an overview of this research can be seen in Table 4.9 below.

Table 4.9. Move Analysis and Contrastive Rhetoric Studies

Study	Language(s)	Disciplines and Focus
Fakhri (2004)	Arabic	RA introductions in a socio-political journal
Loi & Evans (2010)	English and Chinese	RA introductions in educational psychology
Loi (2010)	English and Chinese	RA introductions in educational psychology
Martín & Pérez (2014)	Spanish and English	RA introduction Move 3 in clinical and health psychology, dermatology, political philosophy, political science
Moreno & Swales (2018)	English and Spanish	RA discussion sections in the life sciences, healthcare sciences, social sciences, and other natural sciences
Sheldon (2011)	English and Spanish	Applied linguistics RA introductions
Van Bonn & Swales (2007)	English and French	Linguistics RA abstracts

As can be seen in the table, combining contrastive rhetoric with move analysis has had limited applications, with most focusing on RA introductions. Similar to the findings noted for intra-disciplinary studies, this research has found variation across languages, particularly at the step level. The findings with respect to RA introductions were discussed above in section 4.1.1.1. Another study of note, carried out by Van Bonn and Swales (2007), examined English and French

RA abstracts in the language sciences. The study found that in French and English abstracts of the same paper, writers sometimes frame their purposes in different ways. Van Bonn and Swales comment that these differences may be due to the different audiences that the writers are trying to reach (e.g., whether a local or regional audience or a more global audience).

4.1.2.2 Move Analysis Research on Multiple Disciplines

A handful of studies have analyzed several disciplines at once to examine interdisciplinary similarities and differences as well as to make generalizations across disciplines. This area of research has not been as widespread as studies on single disciplines, which can be seen in Table 4.10 below. This is explainable by the fact that move analysis is a labor-intensive process, requiring human coders to interpret the functions of text segments. To make research on multiple disciplines manageable, studies have tended to analyze a limited number of disciplines and have tended to examine only a single RA section or a specific RA move (e.g., Dahl, 2008; Holmes, 1997; Lim, 2010). Nonetheless, large-scale studies have been carried out. Peacock (2002, 2011) examined methods and discussion sections across eight disciplines, and Cotos et al. (2015, 2016, 2017) examined the entire RA structure of 30 disciplines.

Table 4.10. Move analysis studies on multiple disciplines

Study	Disciplines	Focus
Arsyad (2013)	Religious Studies; Education; Economy & Management; Language & Literature; Psychology; Social sciences	Moves in methods sections for Indonesian writers
Cortes (2013)	Agronomy; Applied Linguistics; Animal Science; Biology; Business; Chemistry; Civil & Materials Engineering; Communication Studies; Computer Science; Economics; Physics & Astronomy; Statistics; Urban &Regional Planning	Introduction moves and lexical bundles
Cotos, Huffman, & Link (2015, 2016, 2017)	Applied Linguistics; Art & Design; Curriculum & Instruction; Economics; Business; Psychology; Sociology; Special Education; Agricultural & Bio-Systems Engineering; Agronomy; Animal Science; Bioinformatics; Biomedical Sciences; Biophysics; Chemical Engineering; Environmental Engineering; Food Science; Forestry; Geological and Atmospheric Sciences; Horticulture; Immunobiology; Mechanical Engineering; Metrology; Microbiology; Molecular, Cellular, & Developmental Biology; Physics & Astronomy; Plant Physiology; Synthetic Chemistry; Urban & Regional Planning; Veterinary Medicine	Rhetorical moves and steps in all RA sections
Dahl (2008)	Economics; Linguistics	Moves and steps associated with new knowledge claims
Durrant & Mathews-Aydınlı (2011)	Anthropology; Business; Economics; Hotel, Leisure & Tourism Management; Law; Politics; Publishing; Sociology	Introduction moves and corpus-based phraseology
Gray, Cotos, & Smith (2020)	Applied Linguistics; Art & Design; Curriculum & Instruction; Economics; Business; Psychology; Sociology; Special Education; Agricultural & Bio-Systems Engineering; Agronomy; Animal Science; Bioinformatics; Biomedical Sciences; Biophysics; Chemical Engineering; Environmental Engineering; Food Science; Forestry; Geological and Atmospheric Sciences; Horticulture; Immunobiology; Mechanical Engineering; Metrology; Microbiology; Molecular, Cellular, & Developmental Biology; Physics & Astronomy; Plant Physiology; Synthetic Chemistry; Urban & Regional Planning; Veterinary Medicine	Multi-dimensional analysis of moves
Holmes (1997)	History; Political Science; Sociology	Discussion section moves
Hyland (2004)	Philosophy; Sociology; Applied Linguistics; Marketing; Electrical Engineering; Mechanical Engineering; Physics; Biology	Abstract moves

Table 4.10 continued

Jiang & Hyland (2017)	Applied Linguistics; Marketing; Philosophy; Electronic Engineering; Medicine; Physics	Metadiscourse nouns and moves
Lim (2010)	Applied Linguistics; Education	Results section moves
Lu et al. (2020)	Anthropology; Applied Linguistics; Economics; Political Science; Psychology; Sociology	Syntactic complexity of introduction moves
Martín & Pérez (2014)	Clinical and Health Psychology; Dermatology; Political Philosophy; Political Science	Introduction moves and steps that promote one's research
Moreno & Swales (2018)	Life Sciences, Healthcare Sciences, Social Sciences, and Other Natural Sciences	RA discussion sections written in English and Spanish
Omidian et al. (2018)	Mechanical Engineering; Physics; Biology; Sociology; Marketing; Applied Linguistics	RA abstract moves and lexical bundles
Peacock (2002, 2011)	Physics; Biology; Chemistry; Environmental Science; Business; Language & Linguistics; Law; Public & Social Administration	Moves in methods and discussion sections
Swales and Najjar (1987)	Physics; Educational Psychology	Introduction moves

Research specifically focused on interdisciplinary variation has revealed similarities and differences in RA structures, which has been discussed above. Furthermore, as can be seen from the table, a growing trend involves examining specific linguistic and grammatical features of moves within a section, such as phraseology, metadiscourse, and co-occurring lexico-grammatical patterns (i.e., a multi-dimensional analysis) (Cortes, 2013; Durrant & Mathews-Aydınlı, 2011; Gray et al., 2020; Jiang & Hyland, 2017; Lu et al., 2020). Research that has combined corpus-based approaches with move analysis will be reviewed in more detail in section 4.1.3 below.

Despite the fact that there have been large-scale inter-disciplinary studies, a notable gap is that the research has tended to only focus on RAs that follow the IMRD format. Holmes (1997) is a notable exception, having examined history RAs; however, most studies have been inclined to shy away from non-IMRD structures since this would pose a considerable workload for developing a move-analysis codebook. Nonetheless, this has perhaps resulted in a skewed understanding of just how similar and different RA structures are.

4.1.2.3. Conclusions on Move Analysis Research on Disciplines

The above review of move analysis research across and within academic disciplines reveals that much emphasis has been placed on uncovering variation. Examining variation is important from both pedagogical and sociolinguistic standpoints. Regarding the former, disciplinary variation is a key consideration when providing English for Academic Purposes (EAP) instruction, particularly to graduate students. If intra- and inter-disciplinary move structures are similar, this may serve as a partial justification for explicitly teaching such structures to students from diverse disciplinary backgrounds. On the other hand, if there is substantial variation, then explicitly teaching generalizations about move structures may, at best, be unhelpful, and at worst, lead students astray. Based on the current research, it would seem that, while moves tend to be more consistent across disciplines, particularly those identified in RA introductions by Swales (1990; 2004), steps show more variability.

With respect to sociolinguistics, variation is important in helping us understand what Hyland (2004) refers to as the "social creation of knowledge". Roughly, the idea is that discourse conventions become set and evolve partially in response to the knowledge creating practices of scholars. Importantly, these practices are influenced by disciplinary ideologies, defined by Silva (2005) as being constituted by an ontology (the nature of reality), epistemology (the nature and limits of knowledge), axiology (the nature of value), and methodology (a means by which inquiry is carried out and knowledge constructed). To be sure, ideology is only one factor among several that explain discourse conventions (others may include, for example, cognitive principles about the way the mind works, such as how language is processed); however, there is little doubt that there is a robust connection between discourse conventions and ideology.

4.1.3 Move Analysis and Linguistic Analysis

Linguistic analysis has been a part of move analysis since its initial stages. For example, examining rhetorical moves in results sections of sociology articles, Brett (1994) documented lexical and grammatical aspects of moves and steps, such as verb choice preferences and cohesive devices. Likewise, Nwogu (1997), examining moves and steps in medical research articles, noted linguistic features such as verb tense preferences and the syntactic placement of items such as author name(s) when citing research. However, in the early days of move analysis research,

linguistic analyses were often limited by (a) a reliance on salience to determine noteworthy features (i.e., a reliance on lexical and grammatical features that seem prominent to the analyst and are deemed noteworthy) as well as (b) no precise quantitative documentation of the pervasiveness and frequency of the features.[39]

More recently, the tools of corpus linguistics have been used to address some of these challenges. Corpus-based approaches involve coding texts electronically to allow for computer-assisted analyses (Biber et al., 2007). When used in conjunction with move analysis, this involves identifying both linguistic features as well as rhetorical moves and then linking the two.[40] This has several benefits for move analysis researchers. First, it helps to address what Moreno and Swales (2018) refer to as the "form-function gap", i.e., the lack of understanding of the ways that moves are carried out with specific linguistic features. In addition, corpus-based approaches help researchers document and analyze (a) the frequency and length of moves and steps, (b) the pervasiveness of moves and steps, and (c) the location of moves in relation to one another.

This section will review move analysis studies that have employed corpus tools during the past decade (since 2010). Unlike the preceding sections, this section will not limit the scope of the review solely to the RESEARCH ARTICLE (RA) genre; rather, the review will take into account all such studies that have targeted academic genres (e.g., the DISSERTATION, MASTER THESIS, STUDENT ESSAY, etc.). Table 4.11 below presents possible linguistic targets for corpus-assisted move analysis.

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[39] Pervasiveness in this context refers to the extent to which a feature appears across all texts of a corpus. A feature could be frequent (relatively speaking), but not pervasive, for it could occur a large number of times in a small number of texts.

[40] Depending on whether the linguistic forms or moves are first identified, a distinction is drawn between a form-first and function-first approach (Yoon & Casal, 2020). In the case of the former, this involves first identifying some linguistic feature (e.g., lexical bundles) and then interpreting the function for each feature. In the case of the latter, the functions are first identified, and then linguistic analyses are conducted for each function. Each approach has certain advantages and drawbacks. Most outstanding, each approach has a slightly different emphasis, with the former placing more emphasis on forms and the latter on functions. Furthermore, the function-first approach can be more comprehensive in identifying moves and steps, for a form-first approach may not find identify linguistic patterns corresponding to every function. On the other hand, a function-first approach can be more labor-intensive.

Table 4.11. Possible corpus-based approaches for investigating moves and steps

Linguistic focus	Facets	Description and Applications
Lexical	Keywords	Words that are significantly frequent in particular moves and steps compared with others
	Vocabulary	Vocabulary profile of moves and steps (i.e., how commonplace the vocabulary is)
	Collocation	Words frequently associated with keywords as well as semantic prosody and preference[41]
	Phraseology	Multiword constructions, such as lexical bundles
Discourse	Metadiscourse	Interactional functions used to structure and comment on discourse (e.g., hedges, signposts, etc.)
	Propositional relations	Semantic relations that hold between propositions (such as *reason-result*).
Grammatical	Morphology	Verb tense and aspect used to accomplish moves and steps
	Syntax	Voice (passive or active) used for specific functions and within specific text sections; syntactic complexity

Not all of these linguistic aspects have been explored in conjunction with move analysis research. Lexical studies have been particularly widespread, which can be seen below in Table 4.12 below. In what follows, each of the three linguistic areas of focus identified in Table 4.12 will be further discussed.

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[41] While closely related, semantic prosody and semantic preference are distinct. Semantic prosody is the way in which the meaning of a word is influenced and modified by its frequent collocates (which can include the word taking on a certain connotation), while semantic preference is the tendency for a word to collocate with others of a certain semantic type (Xiao, 2015). For instance, Rühlemann (2010) notes that the phrasal verb "break out" has a semantic preference for nouns that refer to physical violence (e.g., a war broke out; the region broke out in conflict; a fight broke out). This arguably causes the phrasal verb "break out" to carry a certain negative semantic prosody since it is associated with violent events. This form of research may be of interest in move analysis since semantic prosody is a way for writers to imbue a text with nuanced meanings. For L2 writers, this knowledge is especially important since using a word with abnormal semantic preferences may lead to awkward readings and may render the rhetorical move being made ineffective.

Table 4.12. Corpus-assisted move analysis studies

Study	Genre & Focus	Discipline(s)	Linguistic Features
Lexical Studies			
Casal & Kessler (2020)	Fulbright Grant Personal Statements	NA	P-frames
Cortes (2013)	RA Introductions	Agronomy; Applied Linguistics; Animal Science; Biology; Business; Chemistry; Civil & Materials Engineering; Communication Studies; Computer Science; Economics; Physics & Astronomy; Statistics; Urban & Regional Planning	Lexical Bundles
Durrant & Mathews-Aydınlı (2011)	Introductions in MA students social sciences (BAWE) + professionally published articles. Specifically, the step *indicating structure*.	Anthropology; Business; Economics; Hotel, Leisure, & Tourism Management; Law; Politics; Publishing; Sociology	Phraseology (formulaic language and vocabulary)
Le & Harrington (2015)	RA Discussion Sections; commenting on result steps	Applied linguistics	Keywords (nouns and verbs only) and phraseology
Li, Franken, Wu (2020)	Dissertation Abstracts	News Media Journalism; Philosophy & Psychology; Religion; Language; Arts; Literature; Rhetoric & Criticism; History	Lexical Bundles
Mizumoto et al. (2017)	Entire RA (including abstract)	Applied Linguistics	Lexical Bundles
Omidian et al. (2018)	RA abstracts	Mechanical Engineering; Physics; Biology; Sociology; Marketing; Applied Linguistics	Lexical Bundles
Saber (2012)	Entire RA	Biomedicine	Keywords (nouns and verbs only) and phraseology
Yoon & Casal (2020)	Conference Abstracts written for AAAL	Applied linguistics	P-frames

Table 4.12 continued

Discoursal Studies

Del Saz-Rubio (2011)	RA introductions	Agricultural Sciences	Metadiscourse
Jiang & Hyland (2017)	RA abstracts	Applied linguistics; Marketing; Philosophy; Electronic Engineering, Medicine, Physics	Metadiscourse nouns

Grammatical Studies

Ädel (2014)	Native and non-native student essays	Linguistics	Anticipatory "it" constructions
Gray, Cotos, & Smith (2020)	Entire RA	Applied Linguistics; Art & Design; Curriculum & Instruction; Economics; Business; Psychology; Sociology; Special Education; Agricultural & Bio-Systems Engineering; Agronomy; Animal Science; Bioinformatics; Biomedical Sciences; Biophysics; Chemical Engineering; Environmental Engineering; Food Science; Forestry; Geological and Atmospheric Sciences; Horticulture; Immunobiology; Mechanical Engineering; Metrology; Microbiology; Molecular, Cellular, & Developmental Biology; Physics & Astronomy; Plant Physiology; Synthetic Chemistry; Urban & Regional Planning; Veterinary Medicine	Multi-dimensional analysis
Lu et al. (2020)	RA Introductions	Anthropology; Applied Linguistics; Economics; Political Science; Psychology; Sociology	Syntactic complexity
Tanko (2017)	RA Abstracts	Literature	Syntactic complexity and lexical density

4.1.3.1. Lexical Features and Move Analysis

Lexical-based investigations of moves and steps have been the most popular corpus-based approach. In general, most studies have investigated what can broadly be referred to as phraseology.[42] Three types of phraseological investigations have been conducted: (a) studies of lexical bundles; (b) studies of p-frames; and (c) studies of keywords and phraseology.

Lexical bundles—sometimes referred to as "n-grams"—can be defined as "frequently occurring contiguous words that constitute a phrase or pattern of use" (Greaves & Warren, 2010). This could include phrases such as "as can be seen", "it is a fact", "the thing is", "it turns out that", etc. Lexical bundles are typically identified by setting parameters for (a) the number of continuous words (e.g., 3, 4, 5, or 6 continuous words), (b) the frequency of the bundle (e.g., it must appear [x] number of times per 100,000 words), and (c) the dispersion or pervasiveness of the bundle (e.g., it must occur in at least 5% of all texts in the corpus). Lexical bundles and moves have been investigated in RA introductions (Cortes, 2013), applied linguistics RAs (Mizumoto et al., 2017), RA abstracts (Omidian et al., 2018) and dissertation abstracts (Li et al., 2020).

A closely related approach to lexical bundles investigates what are called "p-frames". P-frames are discontinuous sequences of words. This means that there can be a variable slot within the frame (indicated by the "*"), such as "the * fact that", or "* studies have found". Some argue that p-frames better capture phraseological patterns in academic writing than lexical bundles (Yoon & Casal, 2020). P-frames and moves have been investigated in conference abstracts (Yoon & Casal, 2020) as well as Fullbright grant personal statements (Casal & Kessler, 2020).

The final approach combines keywords analysis with phraseology. Keyword analysis can be done qualitatively by having human coders identify words that play a crucial role in a discourse (i.e., either in a corpus or a single text) or quantitatively by having a computer calculate words that are "statistically characteristic of a text or set of texts" (Culpeper & Demmen, 2015, p. 90). The latter approach involves comparing two data sets: A target corpus (from which the keywords are identified) and a reference corpus (used as a point of comparison). Words that are either significantly frequent in the target corpus (positive keywords) or infrequent (negative keywords) are compiled into a list of keywords (Evison, 2010). After keywords have been identified,

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[42] Studies of phraseology can be conducted along several parameters, including the length of the phrases (e.g., 2 words, 3 words, 4+ words), the idiomatic status of the phrases, and whether the phrases are continuous (an uninterrupted sequence of words) or discontinuous (sequences that have a variable slot, such as "by the * of") (Gray & Biber, 2015).

researchers then investigate phraseological patterns associated with the keywords. This approach has been used to investigate RA discussion sections in applied linguistics (Le & Harrington, 2015) as well as biomedical RAs (Saber, 2012).

While each of the above approaches targets phraseology in different respects, similar findings have emerged from all three approaches, two of which are most noteworthy: (a) certain phrases co-occur with moves and steps and (b) certain phrases are used as initiators of moves or steps. Regarding the latter point, Cortes (2013) was one of the first to draw attention to how some moves are carried out by key phrases in sentence initial positions, which she referred to as *triggers*. For example, in her large-scale cross-disciplinary study of lexical bundles in RA introductions, Cortes found the phrase "the purpose of the present research" was used to trigger the step *announcing present research* and the phrase "little is known about the" was used to trigger the step *indicating a gap*. Yoon and Casal (2020) built upon Cortes' research, noting that certain p-frames also trigger moves and steps in conference abstracts. For instance, "the present study * to" was used to *announce present research*. However, the authors also argue that triggers need not occur in sentence initial positions, for in certain cases, the p-frame triggers occurred after dependent clauses (e.g., "examining L1 and L2 learners in an EFL context, **the present study aims to** address…").

With respect to the correlation between functions and phraseology, most of the studies have found strong correlations, at least for certain phrases. Le and Harrington (2015), for instance, found certain keywords and their associated phrases to co-occur with particular functions in discussion sections of RAs in applied linguistics. For example, phrases associated with the keywords "consistent" (e.g., "these findings are **consistent** with") and "support" (e.g., "the findings **support**") were commonly used in the step *making comparisons*. Perhaps of greater interest, some phrases were found to *only* occur with certain moves or steps, which I will refer to as *function exclusive phrases*. For example, comparing lexical bundles in abstracts in the natural and social sciences, Omidian et al. (2018) found the phrase "it is well known that" to be function exclusive for the move *situating the research*. A recent study by Casal and Kessler (2020) also identified function exclusive phrases in personal statements written for Fulbright applications, suggesting that this phenomena may occur across a wide range of genres.

One final finding important to point out comes from studies drawing on multiple disciplines. These studies have found that certain phraseological patterns are pervasive and frequent across

disciplines (e.g., Cortes, 2013; Durrant & Mathews-Aydınlı, 2011; Li et al., 2020; Omidian et al., 2018), suggesting that these phrases might be useful for general EAP instruction. On the other hand, this finding should be cautiously applied, for Omidian et al. (2018) found that researchers in the natural and social sciences employed bundles with different functions at statistically significant rates. Most outstanding, researchers in the natural sciences used *research-oriented* bundles much more frequently, i.e., bundles that describe some aspect of the research being conducted, such as a procedure, a quantity, a location, etc. Furthermore, as Li et al. (2020) point out, certain bundles have also been found to be discipline specific. Thus, it may be fruitful for future research to continue to examine the extent to which there is variation in phraseological patterns across disciplines.

4.1.3.2. Grammar and Move Analysis

Only a handful of studies have examined grammatical aspects of rhetorical moves using corpus tools; however, there is some indication that this trend is on the rise. Most of these studies examined several grammatical features at once, although Ädel (2014) looked specifically at extraposed "it" constructions (e.g., "it is a fact that….") in student corpora. Two of the most recent grammatical studies of moves examined multiple grammatical features in RAs from several disciplines (Gray et al., 2020; Lu et al., 2020). Gray et al. (2020) conducted a multi-dimensional analysis of rhetorical moves in RAs across 30 disciplines.[43] The authors identified four dimensions of grammatical features, which were given the following labels: (1) interpretation vs. simple reportage; (2) abstraction vs. overt empiricism; (3) procedural narration; (4) interpreting results vs. informational density. Dimension scores for each rhetorical move were then calculated. This allowed the authors to identify co-occurring grammatical features that were frequent with particular moves, and it allowed them to make comparisons across moves. For example, the study found that Move 2 in the discussion (*framing new knowledge*) relied on grammatical features corresponding to the "interpretation-end" of dimension 1 (which included features such as linking adverbials and modal verbs) while Move 2 in the methods section (*describing the study*) relied on grammatical features corresponding to the "simple reportage-end" of dimension 1 (which included features such as past tense and passive voice). The other study, carried out by Lu et al. (2020),

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[43] See Chapter 2 Section 2.3.2 for an overview and explanation of multi-dimensional analysis.

examined the following five measures of syntactic complexity in RA introductions across seven disciplines in the social sciences: (1) sentence length, (2) nominalization, (3) finite dependent clause, (4) non-finite dependent clause, and (5) left-embeddedness.[44] The study found significant differences in the complexity measures across moves. For example, the authors found that Move 3 Step 7, *outlining paper structure*, had significantly shorter average sentence lengths than the other moves.

When compared with the research interest in phraseological and lexical aspects of rhetorical moves, research on grammatical characteristics has received much less attention. It may be important to continue to expand this research area, for as Lu et al. (2020) argue, grammatical aspects such as syntactic complexity play an important role in determining writing quality.

4.1.3.3. Discourse and Move Analysis

Although move-analysis itself is a form of discourse analysis, this does not preclude it from being used in conjunction with other forms of discourse analysis. Perhaps the most prominent form of corpus-based discourse analysis used in combination with move analysis has been the examination of metadiscourse, which will be the focus of this section. While studies in this domain have been quite limited, this combined approach offers interesting insights about rhetorical moves, which we will be shown below.

Metadiscourse refers to a wide array of different language functions. These functions are distinct from rhetorical moves in the respect that, while moves focus on functions in relation to more over-arching rhetorical purposes of a discourse, metadiscourse focuses on generic types of functions that involve relations between text, audience, and author. Importantly, metadiscourse functions do not need to be understood in reference to broader rhetorical goals. Furthermore, metadiscourse functions are typically realized by individual words and phrases, in contrast to rhetorical moves and steps, which are typically realized at minimum at the clause level and often expand across multiple sentences.

According to Hyland and Tse (2004), metadiscourse functions are defined by three key principles:

1. Metadiscourse is separate from the propositional content of a discourse.

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[44] "Left embeddedness" refers to the number of words that occur before the main verb of a sentence.

2. Metadiscourse involves writer-reader interactions in the text.

3. Metadiscourse involves relations that are internal to the text (not external) (p. 159).

This conception is closely related to Halliday and Matthiessen's (2004) interpersonal and textual functions described in Chapter 2. The distinction between interpersonal and textual functions are reflected in Hyland's (2005) metadiscourse scheme, which differentiates between *interactive* (i.e., textual) and *interactional* (i.e., interpersonal) metadiscourse. The former includes functions whereby the author guides the reader in interpreting the text. This can include, for example, the use of linking adverbials and signposts, which assist the reader by showing how clauses, sentences, and paragraphs are related. The latter (interactional) are ways in which the author comments on the propositional content or engages with the reader. This includes, for example, hedging and boosting claims, which allow authors to either strongly or weakly commit to a claim (Hyland, 2017). Table 3 provides an overview of these constructs with common linguistic expressions used to carry out the metadiscourse functions.

Table 4.13. Interactive and interactional metadiscourse. Adapted from Hyland (2005)

Interactive Type	Function	Examples
Transitions	Show the relation between clauses.	In addition / therefore / however
Frame Markers	Refer to discourse acts and text stages.	The purpose of this paper / to conclude
Endophoric Markers	Refer to information in other parts of the text.	In section 1 / aforementioned / in Figure 1
Code glosses	Aid readers in grasping meaning by elaboration or reformulation.	For example / in other words
Evidentials	Refers to information from other texts.	[x] states / According to [x]

Interactional Type	Function	Examples
Hedges	Withhold full commitment to a proposition	Might / perhaps / possible
Boosters	Show strong commitment to a proposition	In fact / surely / it is clear
Attitude Markers	Express writer's attitude towards proposition	Surprising / it is interesting that / unfortunately
Engagement Markers	Refer to and engage the reader	Note that / consider / you can see that
Self Mentions	Refer to one's self	I / we / my / our

Two studies have examined relations between rhetorical moves and metadiscourse: Jiang and Hyland (2017) and Del-Saz Rubio (2011). The latter examined the use of metadiscourse in RA introduction moves in the agricultural sciences via Hyland's (2005) model discussed above. It was found that Move 1 (*establish the territory*) employed much more metadiscourse than the other moves, with 90% of metadiscourse occurring in Move 1. Furthermore, it was found that Move 1

commonly used evidentials (i.e., citations) as well as hedges. The study also revealed that specific moves tended to rely more heavily upon different types of metadiscourse. While Move 1 predominately used evidentials, Move 2 relied heavily on transition markers, and Move 3 used frame markers more than other types of metadiscourse. On the other hand, Jiang and Hyland (2017) examined the use of metadiscourse nouns[45] in the abstract moves of 6 disciplines: 3 in "soft" disciplines (applied linguistics, marketing, and philosophy) and 3 in "hard" disciplines (electronic engineering, medicine, and physics). The authors found that metadiscourse nouns were much more common in the soft disciplines, particularly in the *purpose move* of the abstract. Overall, these studies show that particular moves may co-occur with other linguistic functions. This has important pedagogical implications, as it can help instructors draw attention to nuances that writers use within moves and steps to build clear and compelling arguments.

4.1.3.4. Conclusions on Corpus-Informed Move Analysis

The research of the past decade has demonstrated that a synthesis of corpus approaches with move analysis is a fruitful area of research. This research has revealed phraseological, grammatical, and discoursal aspects of rhetorical moves, which has led to important pedagogical implications. It has also helped to address the "function-form gap" (Moreno & Swales, 2018) by providing instructors with concrete and specific linguistic features of moves that can be targeted or highlighted. Nonetheless, there are concerns to address going forward: (1) Some studies are becoming highly restricted in focus, sometimes examining specific linguistic features of a specific rhetorical step (e.g., Durrant & Mathews-Aydınlı, 2011). While such research can highlight linguistic nuances, it seems somewhat limited in terms of the pedagogical implications that it can afford. (2) One might wonder whether research on linguistic features of moves will lead to overly prescriptive pedagogies. Specifically, such research might suggest not just what rhetorical functions one ought to carry out, but how one should word them as well. Taken to the extreme, this could result in the language user being relegated to the position of simply having to 'fill out forms'. Whether or not this would be a desirable development in professional writing is another matter. At any rate, researchers often attempt to navigate around this concern by arguing that their findings should be employed to raise rhetorical awareness and to increase learner linguistic

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[45] In other words, they restricted their study to nouns that are used to carry out metadiscourse functions, e.g., "fact" (which could be used to boost a claim).

repertoires rather than become part of a normative framework for teaching specific linguistic features (e.g., Casal & Kessler, 2020).

4.1.4 Conclusions on Move Analysis

Since Swales' (1990) landmark work on genre analysis, move analysis has for several decades been a flourishing research paradigm within the English for Specific Purposes tradition. As is evident from this review, move analysis has been used to examine research articles in a wide array of disciplines, revealing both cross-disciplinary similarities and differences. Furthermore, all aspects of the IMRD research article format have been investigated, although the methods and results sections have drawn less attention than introductions and discussions. Finally, the past decade has witnessed the rapid growth of studies employing move analysis in conjunction with corpus-based methodologies to investigate linguistic features of moves and steps.

This review also highlights some notable gaps and areas of future research interest. First, little research has compared move structures across languages. As shown in Table 4.9 above, only a handful of studies have attempted to discern whether language background influences the types of moves and steps commonly employed by professional academic writers. Such research can yield important insights about differing discourse practices, which can help professional writers make informed decisions when writing for different audiences. Second, while numerous move analysis studies have explored disciplines in the natural and social sciences, far fewer have investigated disciplines in the humanities. Only art history (Tucker, 2003) and literature (Tankó, 2017) have received focused attention, although comparative studies have included humanities disciplines as well (e.g., Holmes, 1997; Jiang & Hyland, 2017). This is unfortunate because the discourse practices of the humanities are likely to be distinctive from those of the natural and social sciences, particularly because most research articles in this field do not utilize the IMRD format. Third, while several studies have been designed to explore interdisciplinary variation, only a few have specifically targeted intradisciplinary variation. Notable exceptions include Samraj (2002, 2005) and Kanoksilapatham (2015). It should be noted that although several studies on single disciplines have documented that moves and steps vary across writers, many of these studies did not take a principled approach to attempt to identify the influence of intradisciplinary factors, such as research paradigm or sub-discipline. Finally, this review points to the need for more focus on move analysis methodology. The grain-size of moves and steps as well as the emphasis placed on

perlocutionary or illocutionary aspects when identifying rhetorical functions has led to contrasting models and research findings.

4.2 Research on Writing in Philosophy

Compared to many of the disciplines in the natural and social sciences, philosophy has received much less research attention in the move analysis research tradition. Nonetheless, there have been a handful of studies that have employed move analysis to study philosophical writing. In addition, outside of move analysis, large-scale comparative studies and rhetorical studies have examined philosophical writing. This section will review this research, identifying generalizations and shortcomings. These findings will be used as a point of comparison for the current study in later chapters. This section also aims to better motivate and situate the current study by identifying the need for further research on philosophical writing. To this end, this section will begin by establishing the need to study writing in humanities.

4.2.1. The Distinctive Nature of Writing in the Humanities

In this section, I will argue that recent research on writing in the humanities shows that professional writing in this academic area has distinct and unique characteristics. This motivates the need to continue to carry out writing-based research on the humanities. First, from a sociolinguistic standpoint, further research could uncover additional linguistic and discoursal practices that make writing in this field distinct. Furthermore, from a pedagogical perspective— especially with respect to L2 writers—this research could, among several possible pedagogical implications, (a) help undergraduate and graduate students identify writing expectations of instructors and (b) provide guidance to writing instructors designing instructional materials. As a caveat, I should note that this section is not meant to provide a comprehensive survey of writing in the humanities; rather, its modest aim is to motivate the need for further research in the humanities and, more specifically, in philosophy.

A first piece of evidence that writing in the humanities is distinct comes from a large-scale study. Stotesbury (2003) analyzed how writers used evaluation in 300 RA abstracts across a range of disciplines in the humanities, social sciences, and natural sciences. The study found that, while all three fields used similar amounts of evaluation in the abstracts, there were notable differences

in the grammatical means by which evaluation was carried out. For example, similar to the social sciences and distinct from the natural sciences, humanities' writers heavily relied on the use of nouns and adjectives to carry out evaluation (humanities writers on average used nouns and adjectives to carry out evaluation 15 times per 1,000 words, compared to only 6 per 1,000 words for writers in the natural sciences). In addition, writers in the humanities used evaluative adverbs (e.g., "**deeply** impacts", "**vividly** describes") at a rate of 3 per 1,000 words compared to just 1 per 1,000 words for writers in the social and natural sciences.

Studies focused on specific disciplines in the humanities have also revealed distinctive writing practices. Tucker (2003), examining how art historians used evaluation in RAs, argued that these writers were somewhat unique in how they expressed evaluation, for they tended to do so via verbal characterizations of art works (e.g., by using reporting verbs). This contrasted, he argued, with the view that academic discourse is generally characterized by evaluation via *modality*, which involves indicating stance towards the truth-value of propositions (e.g., "it is **possible** that [p]"). Furthermore, Tucker found that, while Swales' (1990) RA introduction model was somewhat helpful in analyzing art history RAs, the model was not as compatible as it was for other studies. Specifically, Tucker argued that Move 2 (*establish the niche*) was "oblique" and "indeterminate" and that explicit markers of moves and steps were not common. Explaining why the latter finding might be, Tucker (2003) argued…

> [T]hese texts do not fit the mold of the 'standard' research article, whose experimental bias imposes a rigorous rhetorical distinction between *presenting* and *reporting* the research conducted by the writer…the art-historical researcher is not concerned to report an experiment but to demonstrate, through the amassing and matching of evidence of different kinds, the validity of a particular interpretation of a given work (p. 298).

In other words, Tucker argues that the nature of carrying out research in art history accounts, in part, for its distinctive rhetorical structure compared to other fields, particularly those that use the "standard" IMRD format (i.e., the natural and social sciences). If this is correct, then, extrapolating, it would seem plausible that other disciplines in the humanities would share such differences, as they too often do not carry out experiments in ways similar to the natural and social sciences.

Tankó (2017), analyzing literary RA abstracts, also found interesting differences in this humanities' discipline. Specifically, examining syntactic complexity, the study found that literary

researchers tended to use fewer and longer sentences than writers in linguistics and the natural sciences. In part, Tankó argued this can be explained by the use of embedded moves, i.e., when multiple rhetorical moves are combined and integrated into a single sentence. Tankó gives the following example, which combines the moves *methods* and *purpose* (moves 5 and 4, respectively, in Tankó's model):

> Adapting Wittgenstein's concept of "family resemblance" to an exemplary conjunction of philosophy and literature, {M5} this essay proposes that Beckett's works are less aporetic scenarios of deferral and undecidability than meticulous representations of the largely unarticulated convergent behaviors constituting forms of life. {M4}(Tankó, 2017, p. 48)

It is also noteworthy that the study found literary abstracts to be lexically dense[46] and that writers tended to use low frequency vocabulary items, characteristics which can also be seen in the example above.

A final piece of evidence that writing in the humanities is distinct comes from an early move analysis study carried out by Holmes (1997). This study compared the RA move structure of 3 disciplines (history, political science, and sociology), focusing specifically on the discussion section.[47] The study found that history RAs in particular were distinct from RAs in the other two disciplines. First, only 2 of the 10 history RAs had a clearly discernable methods section. Second, Holmes found that the generic structure of history RAs involved an introduction followed by a main argument or narrative section, which contrasts with the standard IMRD format of many RAs in the natural and social sciences. Attempting to explain this finding, Holmes (1997) argued that "[t]he distinctiveness of history texts is perhaps related to the discipline's concern with providing accounts of discrete events rather than with the discovery of generalizable patterns" (p. 328). If Holmes' account is fitting, then it would seem likely that other humanities disciplines would also have distinctive structures since they too do not tend to aim at making empirical generalizations.

This research shows several respects in which writing in the humanities differs from writing in the natural and social sciences. As was noted above, this is important from both sociolinguistic and pedagogical perspectives. Nevertheless, because there has been a paucity of

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[46] Lexical density is operationalized as the proportion of content words in comparison to the total number of words in a text.

[47] Holmes actually considers history to belong to the social sciences. Presumably, this is because "social sciences" was used in a broad sense to encompass any discipline that involves the study of humans in some way. For this dissertation, however, history will be considered as a discipline of the humanities.

research exploring such differences, there is still a great deal that is unknown. Most outstanding, focused research on specific disciplines in the humanities remains an underdeveloped area of study. Philosophy—the discipline targeted in his study—is one such discipline lacking focused and detailed research.

4.2.2. Move Analysis Studies of Philosophical Writing

A handful of studies have explored philosophical writing via move analysis. An overview of these studies is provided in Table 4.14.

Table 4.14. Move analysis studies on philosophical writing

Study	Genre	Focus
Hyland (2004)	RA abstracts in philosophy, sociology, applied linguistics, marketing, electrical engineering, mechanical engineering, physics, and biology	Move analysis and promotion
Jiang & Hyland (2017)	RA abstracts in Applied linguistics; Marketing; Philosophy; Electronic Engineering, Medicine, Physics	Move analysis and metadiscourse nouns
Martín & Pérez (2014)	RAs in Clinical and Health Psychology; Dermatology; Political Philosophy; Political Science	Introduction Move 3 and promotion
Peters (2011)	Masters' theses in philosophy & Philosophy RAs	Move analysis of introductions; use of intertextuality; use of first-person pronouns
Samraj (2008)	Masters' theses in biology, philosophy, and linguistics	Move analysis of introductions
Samraj (2014)	Masters' theses in biology, philosophy, and linguistics	Move analysis of abstracts

As can be seen in the table, 5 of the 6 studies were comparative in nature, looking at multiple disciplines (Hyland, 2004; Jiang & Hyland, 2017; Martín & Pérez, 2014; Samraj, 2008, 2014). In addition, 3 studies focused on student writing (i.e., Master's students) (i.e., Peters, 2011; Samraj, 2008, 2014). Finally, half the studies focused on introduction sections (Martín & Pérez,

2014; Peters, 2011; Samraj, 2008), while the other half focused on abstracts (Hyland, 2004; Jiang & Hyland, 2017; Samraj, 2014).

Samraj investigated philosophical writing in MA theses across three disciplines (biology, philosophy, and linguistics) both with respect to abstracts (Samraj, 2014) and introductions (Samraj, 2008). In the MA thesis introductions (24 total, 8 for each discipline), it was found that the philosophy texts had no clearly demarcated macro-structure; rather, the chapters were topic based. In addition, while the introductions generally followed Swales' (1990; 2004) three move introduction schema, there were notable distinctive characteristics for each move. With respect to Move 1 (*establishing the territory*), the student writers generally did not *assert centrality*, nor did they typically *review literature*; rather, the writers would draw attention to a philosophical idea or text that would be the focus of their thesis. For Move 2 (*establishing the niche*), common strategies included *raising a question* or *noting some ongoing philosophical problem* rather than *noting a gap*, which was not used in any of the 8 philosophy introductions. Finally, for Move 3 (*occupying the niche*), most of the writers included a goal statement and outlined the organization of the thesis.

Samraj (2008) also examined two other textual aspects worth noting: (1) citation practices and (2) the use of first person singular pronouns (i.e., "I"). Regarding citation practices, it was found that philosophy introductions used citations at lower rates than the other disciplines (4 per introduction compared to 62 per introduction for biology and 24 per introduction for linguistics). In fact, it was found that 3 of 8 philosophy introductions contained no references to previous research at all. Furthermore, the study found that philosophers preferred integral to non-integral citations,[48] with the former accounting for 72% of uses while the latter only accounted for 28%. This sharply contrasted with the other disciplines, where writers more heavily relied on non-integral citations. Regarding the use of first-person singular pronouns (i.e., "I", "me"), the philosophy texts were distinctive in using them at a much higher rate than the other disciplines: the student philosophers used them 64 times total across the 8 articles, while they were only used 9 times total in the biology sub-corpus and 19 times in the linguistics sub-corpus. Most of the 64 instances occurred in Move 3, *occupying the niche* ($n = 47$).

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[48] Integral citations mention an author's name when the writer paraphrases or quotes from the author—e.g., "**Smith (2018)** argued for this view." Non-integral citations do not mention the author's name in the main body of the sentence—e.g., "Some have argued for this view (**Smith, 2018**)". Hyland (2004) argues that this distinction allows writers to place greater emphasis either on the cited author (integral) or on the message (non-integral).

For the MA abstracts (15 from each of the same three disciplines as above), Samraj (2014) also found distinctive writing practices in the philosophy sub-corpus. First, philosophy abstracts were the least likely to contain Move 1 (*situating the study*), with only 4 of 15 using the move compared to 11 of 15 in both biology and linguistics. In addition, only 3 of 15 abstracts in philosophy had a *methods* move (usually manifested as a description of a group of texts that would serve as the basis for the thesis) compared to 15 of 15 in biology and 12 of 15 in linguistics. Finally, the study found that over half of the abstracts had a unique move in comparison to the other disciplines. This move involved giving a chapter-by-chapter outline of what was to come in the thesis. The uniqueness of the philosophy texts led Samraj (2014) to posit an alternative discourse schema for philosophy abstracts. This schema involves three moves: (a) argument, (b) thesis outline, and (c) conclusion. Samraj also notes that some of the philosophy abstracts appear to be more similar to what one would expect to find in professional book reviews than in RA abstracts.

Peters (2011) examined philosophy of education MA thesis introductions (*n* = 3), comparing them to introductions written by professional writers in the field (*n* = 3). The study found several differences between the two groups of writers. For Move 1 (*establishing the territory*), the MA writers relied more heavily upon personal experience and personal narratives when establishing their topic(s) (i.e., using "I"), while the professional writers made more centrality claims. For Move 2 (*establishing the niche*), both groups used a path, faulty-path schema (explained in more detail in the next section); however, students tended to author their own criticisms (e.g., "**I argue** this is problematic because…") while professional writers tended to attribute their criticisms to other authors in the discourse (e.g., "This argument **has been found to be** problematic by [x] and [y]…). Finally, for Move 3 (*occupying the niche*), 2 of 3 professional writers did not outline their arguments at all while all of the student writers did.

Peters accounts for the differences between student and professional writers by reflecting on the different rhetorical aims of the texts. He argues that while professional writers are primarily concerned with creating new knowledge and with joining and continuing ongoing conversations, student writers not only attempt to accomplish this aim, but they must also attempt to demonstrate their expertise (which is presumed in the case of professional writers). Peters holds that this explanation can help us to understand the students' use of "I", as it draws attention to the writer and showcases the writer's ability to, for example, identify some interesting area of research. This is an important consideration since some of Peters' findings on student writing align with Samraj

(2008)—e.g., frequent use of "I" and outlining one's argument—while the professional writers in Peters study used distinctive practices.

The three other move analysis studies on philosophy—Hyland (2004), Jiang and Hyland (2017) and Martín & Pérez (2014)—focused less specifically on philosophy; however, these studies also revealed interesting findings. Hyland (2004) examined the discourse structure of abstracts in 8 disciplines and discovered philosophers preferred three types of move structures: (a) introduction and product (37% of philosophy abstracts); (b) introduction, purpose, and product (27%); and (c) purpose and product (14%). Interestingly, the preferred move sequence employed by philosophers—i.e., sequence (a)—was often the least preferred move sequence for other disciplines. In fact, some disciplines were found to not employ this sequence at all (i.e., marketing and sociology).

Martín & Pérez (2014) examined promotional rhetoric used in Move 3 (*occupying the niche*) of the introductions of RAs across four disciplines (clinical and health psychology; dermatology; political philosophy; political science), comparing English and Spanish written texts. For the political philosophy texts, the study found that Step 5 of Move 3 (*indicating structure*) was common for both English and Spanish writers. It was also found that this step frequently directly followed Step 1 (*announcing present research*). Furthermore, it was found that the step *presenting hypotheses* was uncommon in both English and Spanish RAs (occurring in only 15% and 5% of the texts respectively). Finally, the study found that while English writers tended to use "I" + assertive verbs (e.g., "I will argue") when announcing their arguments, Spanish writers preferred inclusive "we" or impersonal constructions (e.g., "it is argued that…"). In sum, this study highlights interesting ways in which professional writers in philosophy employ similar and distinctive rhetorical strategies and linguistic devices across cultures and languages.

Finally, Jiang and Hyland (2017) examined the use of metadiscourse nouns and rhetorical moves in the abstracts of 6 disciplines: applied linguistics, marketing, philosophy, electronic engineering, medicine, and physics. It was found that philosophers used interactive metadiscourse nouns (language that functions to help guide how a reader interprets a text) more frequently than writers in any of the other disciplines (at a rate of 31.8 times per 1,000 words, compared to, for example, just 8.3 times per 1,000 words for physics). In addition, with respect to interactional metadiscourse nouns (language that functions to either express stance or engage the reader), it was found that philosophers heavily relied upon cognition metadiscourse nouns (nouns that represent

beliefs and attitudes, such as *decision*, *idea*, and *notion*) compared to writers in the other disciplines.[49]

While these move analysis studies have revealed several interesting findings about philosophical writing, there are several limitations in terms of just how much insight they provide. First, overall, the studies are narrowly focused with respect to the genres and genre parts they explored. Martín & Pérez (2014), for example, only examined Move 3 of RA introductions. The most expansive of the studies examined the entire introduction section (Peters, 2011; Samraj, 2008); however, this still leaves much of philosophical writing in need of analysis. Second, three out of six studies focused on student writing rather than professional writing (i.e., Peters, 2011; Samraj, 2008, 2014). As was found in Peters' (2011) study, there may be interesting differences in the ways in which students and professionals employ moves, thus motivating further research on professional writing. Indeed, comparing the results of Hyland (2004) and Samraj (2014), Samraj (2014) found that thesis abstracts typically included a *thesis outline* move, while Hyland (2004) documented no such *outlining* move for professional abstracts. Finally, multiple studies examined a limited domain of philosophy. Peters (2011), for example, examined writings in the philosophy of education. Generally speaking, this is not considered a core area of contemporary philosophy. In addition, Martín & Pérez (2014) analyzed writings in political philosophy, and while political philosophy is a more common area of study than the philosophy of education, this too represents only a small sub-domain of philosophical research. Thus, it would be interesting for future studies to target core domains of contemporary philosophical research (e.g., metaphysics, epistemology, the history of philosophy, ethics, etc.).

What is clear from the extant move analysis research is that philosophical writing has distinctive discourse structures in comparison to other disciplines. This fact, in combination with the shortcomings noted above, motivates further investigations into this discipline via move analysis.

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[49] It may not seem clear that these nouns (e.g., *idea*, *decision*, *attempt*) are actually interactional metadiscourse, for how do they fulfill the function of either expressing stance or engaging with the reader? Jiang and Hyland argue that such nouns can express stance by, for example, indicating either positive or negative attitudes and evaluations on the part of the writer. While this is not wholly clear in all of the example nouns without more context, consider the following example for the cognitive noun *opinion*: "It was Kant's **opinion** that morality is grounded in reason." In this example, there is a plausible case to be made that *opinion* indicates that the author does not hold Kant's argument in high esteem. If such is the case, then arguably "opinion" betrays the writer's stance towards the proposition in question.

4.2.3. Other Forms of Research on Philosophical Writing

In addition to what move analysis research has uncovered about philosophical writing, there have been several other studies from linguistic perspectives (from ESP and EAP traditions) as well as studies that could be considered rhetorical in nature. This section will explore and characterize the research in both of these trends.

4.2.3.1 Comparative Linguistic Studies

The EAP and ESP traditions have conducted linguistic-focused research on philosophy, comparing it with other disciplines. This has predominately been done through the use of corpus linguistics. An overview of these studies is provided below in table 4.15.

Table 4.15. Linguistic-focused studies involving philosophical writing

Study	Genre	Focus
Chang & Swales (1999)	RAs in philosophy, statistics, and linguistics	Use of imperatives and other informal features of academic writing
Gardner, Nesi, & Biber (2019)	British Academic Written English Corpus – 13 student genre families: proposals; literature surveys; case studies; critiques; research reports; essays; exercises; explanations; methodology recounts; design specifications; problem question; empathy writing; narrative recounts	Multi-dimensional analysis, comparing the influence of genre, discipline, and academic level
Gray (2015)	RAs in philosophy, history, political science, applied linguistics, biology, and physics	Register analysis of lexico-grammatical features in different disciplines as well as different types of research (qualitative, quantitative and theoretical).
Hyland (2004)	RAs and Book Reviews in philosophy, sociology, applied linguistics, marketing, electrical engineering, mechanical engineering, physics, and biology	Citation practices in RAs; praise and criticism in book reviews
Nesi & Gardner (2012)	British Academic Written English Corpus – 13 student genre families: proposals; literature surveys; case studies; critiques; research reports; essays; exercises; explanations; methodology recounts; design specifications; problem question; empathy writing; narrative recounts	A broad study of various aspects of student writing, including how students demonstrate knowledge, informed reasoning, and research skills and how they prepare for professional practice.

As can be seen in Table 4.15, 2 of 5 studies were conducted on student writing while 3 of 5 focused on professional writing. Most of the studies (4 out of 5) were large-scale corpus-based investigations that compared writing across multiple disciplines. The emphasis placed on philosophical writing varied considerably in the studies: The research on professional writing had more to say, as two of these works (Gray, 2015; Hyland, 2004) were monographs and the other (Chang & Swales, 1999) focused on only 3 disciplines. On the other hand, the studies on student writing placed less emphasis on philosophical writing in particular.

Regarding the research on professional writing, both Hyland (2004) and Gray (2015) identified several distinctive features of philosophical writing, which is worth summarizing in some detail. Hyland (2004) examined writing in 8 disciplines, focusing on the potential impact of disciplinary culture on writing conventions. Hyland motivates his work in the following way:

> The ways that writers chose to represent themselves, their readers and their world, how they seek to advance knowledge, how they maintain the authority of their discipline and the processes whereby they establish what is to be accepted as substantiated truth, a useful contribution, and a valid argument are all culturally-influenced practical actions and matters for community agreement. These practices are not simply a matter of personal stylistic preference, but community-recognized ways of adopting a position and expressing a stance. 'Doing good research' means employing certain post-hoc justifications sanctioned by institutional arrangements. As a result, the rhetorical conventions of each text will reflect something of the epistemological and social assumptions of the author's disciplinary culture (Hyland, 2004, p. 11).

To identify and describe such disciplinary cultures, Hyland examined several facets of writing: citation practices in RAs, praise and criticism in book reviews, and promotion and credibility in abstract moves (reviewed above). With respect to citation practices in RAs, it was found that philosophy RAs had an average of 85.2 citations per paper (10.8 per 1,000 words). This placed philosophy in the rank of 3rd (near the middle) among the other disciplines when ranked from most to least. This finding clearly contrasts with Samraj's (2008) research, where it was observed that MA thesis introductions contained on average only 4 citations (with several containing no references at all). On the other hand, consistent with Samraj (2008), Hyland found that philosophy utilized integral citations more than non-integral: 35.4% of all citations were non-integral while 64.6% were integral. In fact, philosophy was the only discipline to show a clear preference for integral citations. The next closest discipline, sociology, had a ratio of 64.6% non-

integral to 35.4% integral.[50] Furthermore, it was found that philosophy had the highest rate of reporting verb structures among the disciplines, with 57.1 reporting verb constructions per paper (accounting for 67% of all citations in philosophy). In contrast, the average across disciplines was just 28.6 reporting verb structures per paper.

Commenting on these citation practices, Hyland notes that they suggest philosophers take a strong interest in emphasizing cited authors rather than just placing emphasis on the propositions or concepts in question. He argues that "[h]ere [i.e., in philosophy] knowledge is constructed through a dialogue with peers, in which perennial problems are recycled through personal engagement" (Hyland, 2004, p. 36). In having these dialogues, it would seem that emphasizing reference to the major figures is deemed important. In fact, it is arguable that this goes beyond the peers that one is having a dialogue with, for when discussing ideas of philosophers of the past, names are likewise mentioned via integral citations rather than non-integral (e.g., "As **Kant argues**,…"). This suggests an important link is maintained between ideas and those who advance such ideas, and this practice may serve as a way of indicating insider knowledge and giving due respect.

Hyland also examined praise and criticism in book reviews across the 8 academic disciplines. The results showed that philosophers tended to give more blame than praise, averaging only 3.3 praises compared to 4.3 criticisms per 1,000 words. Only sociology shared this pattern of having more criticism than praise, while the rest of the disciplines offered a higher ratio of positive to negative appraisal (for example, in physics, there was on average 9.7 praises compared to 5.8 criticisms per 1,000 words). This seems to suggest that philosophy places more emphasis on criticizing arguments than other fields (save, perhaps, sociology). On the other hand, as can be seen from the two examples, a field such as physics has a higher density of distinct appraisals per 1,000 words (15.5 appraisals per 1,000 words in physics vs. 7.6 for philosophy). As Hyland comments, this seems to be a general pattern that distinguishes writing in "soft" fields from those of "hard" fields: The softer fields tended to have more elaborate reviews while the harder fields were more compressed.

Turning to Gray (2015), her research examined linguistic features of 270 research articles across six disciplines. The RAs were divided into three groups: theoretical, quantitative, and qualitative (some disciplines had RAs from multiple groups, e.g., *quantitative* political science and

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[50] See note 13 for more details on this distinction.

qualitative political science). Her research revealed interesting findings about philosophical writing in three areas: (a) lexico-grammar, (b) structural complexity, and (c) multi-dimensionality. Regarding lexico-grammatical features, it was found that philosophers used verbs at a much higher rate than writers in the other disciplines: philosophers used verbs, on average, 95 times per 1,000 words, while in the other disciplines, this ranged from 27 to 69 times per 1,000 words. Furthermore, the category "mental verbs" (verbs that indicate some cognitive act, such as *imagine* and *conclude*) were frequently used (19 times per 1,000 words) as were present tense verbs (present tense was 9 times more frequent than past tense verbs). These findings fit with those of Hyland (2004) above, who noted that reporting verb structures play an important role in constructing philosophical dialogues. Gray's findings also show the importance philosophers place on characterizing their own cognitive acts as well as that of others: i.e., is someone *objecting*, *concluding*, *assuming*, etc.

Another interesting finding in the area of lexico-grammar was the use of pronouns. Gray found that among all the disciplines, philosophers used first person singular pronouns the most, at a rate of just under 20 times per 1,000 words. The next closest rate was found in theoretical physics (13 times per 1,000 words), while at the low end of the spectrum, political science (qualitative) used first person singular pronouns at a rate of just 2 times per 1,000 words. This finding is consistent with the research carried out by Samraj (2008) and Peters (2011), who both made note of the important role of first person pronouns in graduate student writing in philosophy. Considering Hyland's (2004) comment about the importance of dialogue with peers in philosophy, the following may explain why first person pronouns play such a prominent role: They can help to clearly distinguish how the author fits into the ongoing discussion (e.g., while *they* say [x], *I* say [y]).

With respect to structural complexity, philosophy was also distinct from the other disciplines in that philosophers used clausal structures associated with elaboration more frequently than any of the other disciplines, and they used structures associated with compression less frequently than the other disciplines.[51] Finite adverbial clauses were used at a rate of around 9

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[51] Biber and Gray (2010) note that structural elaboration is typically associated with longer sentences and with imbedded clauses (rather than phrases), which helps to make the meanings and logical relations of sentence parts more explicit. While the authors note there is not a consensus definition in the literature, they associate elaboration with clausal structures such as finite complement clauses (e.g., "I know **that he's doing well**"), non-finite complement clauses (e.g., "I want **to go to the game**"), finite adverbial clauses ("I like playing the game **because it challenges me to think**"), etc. On the other hand, compressed structures are associated with phrases and modifiers in which logical relations and meanings are more implicit. According to the authors, this includes attributive adjectives ("a **small** phone"), nouns as pre-modifiers ("a **glass** jar"), and prepositional phrases as noun modifiers

times per 1,000 words while in the next closest disciplines (quantitative political science and quantitative applied linguistics), they were used just 4 times per 1,000 words. In particular, philosophers utilized *if-then* clauses[52] (e.g., "**if this argument is sound**, it implies that…"), which Gray noted allows them to explore logical possibilities and relationships.

Finally, Gray carried out a multi-dimensional analysis of the research articles, using four dimensions: (1) academic involvement and elaboration vs. information density; (2) contextualized narration v. procedural description; (3) human focus vs. non-human focus; and (4) academese. Philosophy had particularly interesting results in dimension 1, where it was highly distinct from the other disciplines in having a very high positive score (the positive end is associated with lexico-grammatical features such as the use of pronouns, finite clauses, "to be" and "to have" verbs, etc.). This suggests that philosophical writing relies heavily both on structural elaboration as well as grammatical features associated with 'involvement' (which Gray associates with expressing personal stance and evaluation). Overall, Gray's research reveals that the use of certain linguistic features in philosophical writing tends to lie on the extreme ends when compared with other disciplines, suggesting that the writing practices of this discipline are highly distinctive.

The final study in this section that focused on professional writing—Chang and Swales (1999)—examined the use of 'informal' features of academic writing in three disciplines: philosophy, statistics, and linguistics. The informal features included the following: (1) imperatives, (2) *I*/*me*/*my*; (3) unsupported *this*; (4) split infinitives; (5) forbidden first words (e.g., *and*, *but*, *or*); (6) sentence final prepositions; (7) run-ons; (8) sentence fragments; (9) direct questions; (10) contractions; (11) exclamations. The study found that, compared to the other disciplines, philosophers used the 11 informal features the most. In line with Gray's (2015) research above, philosophy used first person singular pronouns more than the other disciplines (684 uses in 10 articles). It was also found that philosophers commonly used direct questions (684 uses in 10 articles) as well as forbidden first words. Reviewing these findings, the authors argue that "it appears that the philosophers…exhibit a more informal and interactive writing style…They achieve their intended rhetorical purposes through the alternation of linguistic moods…and

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(e.g., "the results **of the study**"). To see how certain phrases are more elaborate and others more compressed despite having similar meanings, consider the following: (a) "farms **that are located in Michigan**" (a relative clause), (b) "farms **in Michigan**" (prepositional phrase), (c) "**Michigan** farms" (noun as pre-modifier).

[52] Gray (2015) uses the term "if-clause". My preferred term ("if-then" clauses) does not imply that "then" has to be explicitly used in the construction.

through the manipulation of overt personal pronouns and sentence rhythm" (Chang & Swales, 1999, p. 154).

The final two studies of this section dealt with student rather than professional writing. Both studies drew upon the British Academic Written English Corpus (BAWE). The corpus contains 2,761 student texts across four broad disciplinary areas of study and across four levels of study. The corpus includes 13 student genre families: proposals, literature surveys, case studies, critiques, research reports, essays, exercises, explanations, methodology recounts, design specifications, problem question, empathy writing, and narrative recounts. Consistent with Gray's (2015) multi-dimensional analysis of philosophical writing, Gardner et al. (2019) also found that student writing in philosophy tended to lie at extreme ends in the dimensions compared to other disciplines. For dimension 1 (compressed procedural v. stance towards others), philosophical writing had the most extreme score in the negative pole, while for dimension 2 (personal stance), philosophical writing had the most extreme positive score. This suggests that philosophical writing is distinctive not only at the professional but also at the student level.

The other study, by Nesi and Gardner (2012), was an extensive monograph on student writing. The authors documented distinctive rhetorical and lexico-grammatical practices across disciplines and genres. For philosophy, three findings are of interest. First, examining the genres CRITIQUE and ESSAY across 11 disciplines, the authors found that philosophical writing contained the highest frequency of first-person singular pronouns, at a rate of 34.8 per 10,000 words. The next closest discipline was English, with a rate of 29.4 uses per 10,000 words. On the other hand, at the low end, biological sciences had just 2.6 uses per 10,000 words and engineering averaged just 5.9 uses per 10,000. Nesi and Gardner comment that the use of *I* is particularly common in philosophy in discourse framing moves (e.g., "I have argued that…") as well as in strategies for presenting evidence (e.g., when presenting a generic example, such as "I have a hand. This means…"). Overall, this finding is consistent with Gray (2015) and Chang and Swales (1999) and provides further confirmation that philosophical writing uses first person pronouns more than the other disciplines. Second, with respect to the genre ESSAY, it was found that *if-then* statements in philosophical writing tend to be used for logical deduction, in contrast to other disciplines where such statements are used for other purposes (for example, in law, they tend to be used for describing legal consequences, and in archeology they are often used for making hypothetical inferences). Finally, also in regard to the genre ESSAY, it was found that philosophical writing

tended to use verbs for making concessions, critiquing arguments, entertaining ideas or claims, justifying positions, and doubting positions. Overall, many of these verbs fit within Gray's (2015) category *mental verbs*, thus further confirming the strong presence of this category of verbs in philosophical writing.

In sum, these studies suggest that philosophical writing tends to be highly distinctive from writing in other fields in terms the following linguistic features: (a) first-person pronouns (Chang & Swales, 1999; Gray, 2015; Nesi & Gardner, 2012), (b) clauses associated with structural elaboration (Gray, 2015), (c) verbs, specifically, reporting verbs and mental verbs (Gray, 2015; Hyland, 2004), (d) stance markers and negative evaluation in book reviews (Gardner et al., 2019; Hyland, 2004), (e) the use of integral rather than non-integral citations (Hyland, 2004), and finally (f) the use of informal features, such as direct questions and forbidden first words (Chang & Swales, 1999). While this research helps to paint a picture of what philosophical writing looks like linguistically, more could be done to address the function-form gap (Moreno & Swales, 2018). Specifically, by focusing more upon rhetorical functions, these linguistic features could be understood in connection with the specific rhetorical aims of the authors. For instance, as Samraj (2008) observed in student writing, most instances of first-person singular pronouns occurred in the move *occupying the niche*. In addition, while large-scale corpus studies are useful in helping us to understand writing practices, they have the disadvantage of lacking a detailed analysis and interpretation of the writing conventions of a specific discipline. More focused research could help to further illuminate the distinctive writing practices of philosophy.

4.2.3.2. Genre and Rhetorical Studies Involving Philosophical Writing (Non-move Analysis)

Outside of move analysis and comparative linguistic research on philosophical writing, there have also been a handful of studies that could broadly be classified as genre-based and rhetorical-based research. These studies are summarized below in Table 4.16.

Table 4.16. Genre and rhetorical studies on philosophical writing (excluding move analysis)

Study	Genre	Focus
Bloor (1996)	Philosophy RAs	Argumentation strategies
Geisler (1994)	RAs and student essays in philosophy	Differences in rhetorical practices and writing processes between experts and students
Lancaster (2016)	Student philosophy essays	Genre knowledge and effective rhetorical strategies (specifically, hedging strategies)

Perhaps the most noteworthy study was carried out by Geisler (1994). Geisler compared the reading and writing practices of two experts in philosophy (two PhD students) with two novices (two undergraduate students in a bioethics class) when presented with the same task: To write about the issue of paternalism in biomedical ethics. Geisler found the experts used a strategy she referred to as a *path/faulty path* structure. This organizational scheme involves guiding a reader through a topic by presenting various arguments that are deemed to be faulty solutions or responses to some philosophical issue. Geisler notes that these faulty positions tend to be presented along an order of faultiness: the faultiest arguments are presented first. Eventually, having led the reader through the maze of positions and having pointed out the faulty paths, the main (correct or least faulty) path is presented. A visual model of this discourse schema is presented below. As can be seen in the model, authors present a series of positions on an issue, which can be broadly construed as solutions to a philosophical problem. This could involve any number of paths, depending on the expansiveness of the literature and the detail of the author's analysis. The final path presented is the favored solution by the author.
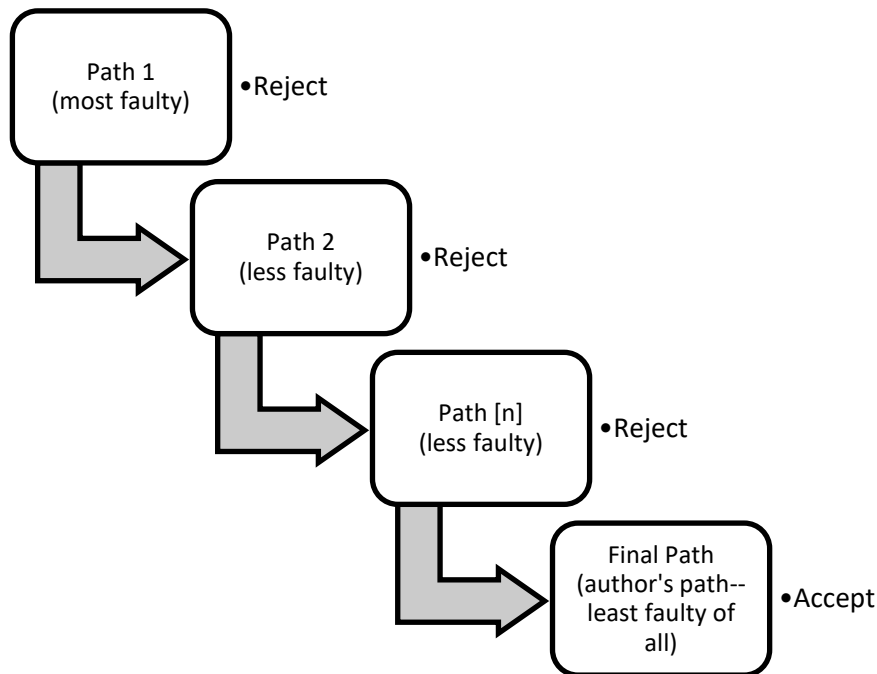
Figure 4.1. Path/Faulty path schema, adapted from Geisler (1994)

It is also worth noting that Geisler (1994) argues the modern philosophical essay creates a *virtual reading experience* for the audience. This involves creating a sense of timelessness for the reader that extends across multiple nodes in "textual space". More concretely, this means that the essay discusses propositions held by others using the present rather than the past tense (making the statements seem timeless). Furthermore, points are linked together into the path/faulty path structure noted above, which creates a sense of movement and progression within the conversation, which is distinct from focusing on a particular point in the space of the dialogue. This observation is important as it draws connections between the rhetorical structure of the text and the specific linguistic features used to accomplish those rhetorical moves. The different rhetorical functions can be seen by considering the examples below:

- In the *Crito*, Socrates **argues** that it is not right for him to escape from prison since there must be respect for the law in order for the state to exist.

- In the *Crito*, Socrates **argued** that it was not right for him to escape from prison since there must be respect for the law in order for the state to exist.

The latter statement seems to draw attention to the historical fact of what Socrates said, whereas the former statement seems to abstract the argument, allowing the author to create the virtual experience of analyzing and considering the ideas as they arise in the discourse. To further drive this point home, consider that this is a 2,400-year-old dialogue being presented as if Socrates is still holding these same beliefs today. If creating this virtual reading experience is, in fact, a rhetorical aim of philosophers, then this may help to explain Gray's (2015) finding that present tense verbs were 9 times more frequent than past tense verbs in philosophical writing.

While Geisler's study offers interesting insights into philosophical writing, outside of the two experts in the study, it is unclear what sample Geisler worked from to make such generalizations about academic philosophical writing. Further research on a wider sample of texts could confirm or disconfirm whether these rhetorical strategies are widely employed. Furthermore, it has now been more than 25 years since Geisler's study. As rhetorical conventions may shift and evolve over time, this also motivates a close analysis of contemporary philosophical writing.

A second detailed rhetorical analysis of philosophical writing was conducted by Thomas Bloor (1996). Bloor identified three strategies he deemed to be common in RAs in the philosophy of mind. He referred to these strategies as (1) "tales", (2) "twin-earth thought experiments", and (3) "imaginary conversations". The first strategy needs little explication: It involves constructing a hypothetical narrative to make a philosophical point. These narratives often serve as counterexamples to philosophical positions or as evidence that one's philosophical solution holds water. For instance, in the following example, Frank Jackson (1982) attempts to argue that physicalism—the tenet that all correct information about the world is physical information—is false. The example shows the level of detail and elaboration that goes into constructing these thought experiments:

> Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specialises in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like 'red', 'blue', and so on. She discovers, for example, just which wave-length combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence 'The sky is blue'. (It can hardly be denied that it is in principle possible to obtain all this physical information from black and white television, otherwise the Open University would of necessity need to use colour television.) What will happen when Mary is released from her black and white room or is given a colour

television monitor? Will she learn anything or not? It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had all the physical information. Ergo there is more to have than that, and Physicalism is false (Jackson, 1982, p. 130).

Furthermore, while Bloor's examination was restricted to the philosophy of mind, this strategy certainly exists in other sub-fields of philosophy, such as biomedical ethics and epistemology. Take, for instance, the following example from a widely cited work by Alvin Goldman (1976) in epistemology:

> Consider the following example. Henry is driving in the country-side with his son. For the boy's edification Henry identifies various objects on the landscape as they come into view. "That's a cow," says Henry, "That's a tractor," "That's a silo," "That's a barn," etc. Henry has no doubt about the identity of these objects; in particular, he has no doubt that the last-mentioned object is a barn, which indeed it is (Goldman, 1976, p. 772).

The second strategy identified by Bloor—twin-earth thought experiments—is really a sub-set of the first, only this strategy involves positing two separate hypothetical situations: One scenario happens in the real world while the other happens in some hypothetical twin-world. The twin world is typically identical to the real world in every respect, save some salient point the philosopher wishes to discuss. As Bloor points out, this strategy allows the philosopher to hold fixed most features and properties in a scenario while modifying and changing a special feature of interest to test out a view or to draw out an intuition ("pump" an intuition, in philosophical jargon). Such a strategy was popularized by the well-renowned philosopher of science Hilary Putnam in his work "The meaning of 'meaning'". Below is where Putnam originally devises this strategy:

> For the purpose of the following science-fiction examples, we shall suppose that somewhere in the galaxy there is a planet we shall call Twin Earth. Twin Earth is very much like Earth; in fact, people on Twin Earth even speak English. In fact, apart from the differences we shall specify in our science-fiction examples, the reader may suppose that Twin Earth is exactly like Earth (Putnam, 1975, p. 139).[53]

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[53] The salient point of interest that Putnam would go on to identify was that Twin Earth contains a liquid very much like water (it is clear, colorless, etc.); however, unlike water, its chemical composition is XYZ rather than H_2O. This thought experiment allowed Putnam to tease out intuitions concerning relations between meaning and reference: Specifically, when someone on Twin Earth uses the term for the clear, colorless liquid on their planet, what do they mean? And do they mean the *same thing* as the language user on the real Earth?

The final strategy is concerned with anticipating and responding to objections, which is an important discourse move in philosophical works. Often times, philosophers need to consider what someone would say in response to their view either in anticipation of objections from that person or because the person is no longer living and cannot actually respond. In order to put these thoughts down in writing, the strategy—as pointed out by Bloor—involves creating a hypothetical conversation with those who espouse the views that one is responding to. Consider the example below, where philosophers Eric Margolis and Stephen Laurence anticipate what Jerry Fodor might say in response to the authors' objections to Fodor's view (it should be emphasized that Fodor has never actually stated such views—these are views attributed to Fodor by Margolis and Laurence).

> What can Fodor say about these sorts of cases? Because he maintains that there are no alternatives to hypothesis testing for explaining how concepts are learned, he only has two options. (1) He can accept that these are examples of concept acquisition that don't involve hypothesis testing yet go on to deny that they count as genuine examples of learning. Alternatively, (2) he can insist that, despite appearances, our examples covertly involve hypothesis testing after all. Neither of these responses is especially plausible, however (Margolis & Laurence, 2011, p. 520).

While these are undoubtably strategies used by philosophers, Bloor does not indicate the frequency and pervasiveness of such strategies. Indeed, like with Geisler (1994), it is unclear what sample was used to make such generalizations. While it is surely the case that such strategies are employed, further research could help to shed light on just how frequent and pervasive they are, and it could help identify additional rhetorical strategies employed by philosophers.

The final study, carried out by Lancaster (2016), investigated the tacit genre knowledge of an advanced undergraduate student in philosophy who received high marks on his written works. Conducting discourse-based interviews (DBI) with both the student and the student's instructor (who graded his work), Lancaster identified and discussed linguistic features and rhetorical strategies that made the student's essays effective. One important finding was that modal verbs such as "might" were quite common. Furthermore, there were key lexical terms used to discuss argumentation and counterarguments, such as "objection", "response", "claim", and "evidence".

Lancaster specifically focused on the way the student expressed epistemic stance through hedges (which limit an author's commitment to a proposition) and boosters (which show strong

commitment to a proposition).[54] What is most interesting is that hedging language performed a wide array of nuanced functions in the student's philosophical writing: it was not merely used to minimize one's epistemic stance towards a proposition. Here are two examples of additional functions discussed by Lancaster:

1. Hedging language can **open space** for dialogue. In other words, the function of the hedged expression is not to limit the author's commitment to a claim; rather, the hedge is used to show that one can understand a claim in a particular way. For instance, an author might say something such as "Plato **might be arguing** that…", which shows a possible interpretation and, thereby, allows the author to then explore this territory.

2. Hedging language can be used for **politeness**. While in these cases it might, indeed, appear that the author is limiting their epistemic stance towards a proposition, nonetheless they may be doing so in order to avoid coming across as rude. For instance, someone might say "Fodor's argument for innate concepts **seems** to have a problem in the third premise." The function of this hedging language could be to be polite to Fodor.

Overall, these studies add interesting insights into the rhetorical conventions of philosophical writing. Because, however, all three studies were conducted on small samples, it would be worthwhile to examine a larger corpus of writing to see whether such strategies are widely employed.

4.2.4 Conclusions on Philosophical Writing

Part 2 of this review demonstrates that the discipline of philosophy engages in highly distinctive rhetorical and linguistic practices. These practices include (a) the move structures of introductions and abstracts (Hyland, 2004; Peters, 2011; Samraj, 2008, 2014), (b) citation practices (Hyland, 2004; Peters, 2011; Samraj, 2008), (c) the use of first-person pronouns (Chang & Swales, 1999; Gray, 2015; Nesi & Gardner, 2012; Peters, 2011; Samraj, 2008), (d) the use of verbs, particularly reporting verbs and mental verbs (Gray, 2015; Hyland, 2004; Nesi & Gardner, 2012), and (e) the use of argumentation strategies, such as path/faulty path structures and thought experiments (tales and twin Earth thought experiments) (Bloor, 1996; Geisler, 1994). While writing in the humanities in general has been found to be distinctive from the hard and social

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[54] Hedging can be accomplished through the use of modals (such as "seems" and "might") as well as adjectives (e.g., "possible") and adverbs (e.g., "perhaps").

sciences, this research shows that philosophical writing is also distinctive even compared with other humanities disciplines.

Although a large number of studies have touched on various aspects of philosophical writing, a comprehensive and in-depth investigation of professional writing practices is lacking. Move analysis studies have mostly focused on student writing (Peters, 2011; Samraj, 2008, 2014) or very specific aspects of the philosophy RA, such as a particular move (Martín & Pérez, 2014) or a particular linguistic feature of moves (Jiang & Hyland, 2017). Furthermore, comparative linguistic studies, while offering insights into distinctive linguistic practices (e.g., Chang & Swales, 1999; Gray, 2015; Hyland, 2004), do not always provide detailed "thick descriptions" of these practices, as the authors must spread out their interpretations and explanations across several disciplines. Finally, the few existing in-depth investigations into the rhetorical practices of professional philosophical writing (i.e., Bloor, 1996; Geisler, 1994) have lacked adequate samples to justify generalizations about these practices. These reasons motivate the need to study the discourse practices of philosophical writing in more detail, which is one of the aims of the present study.

4.3 Conclusions

This chapter examined the extant research on move analysis as well as linguistic and rhetorical research on philosophical writing. In part one, the review argued that while numerous move analysis studies have explored disciplines in the natural and social sciences, far fewer have investigated disciplines in the humanities. This is important because humanities' disciplines do not typically use the IMRD structure. It would thus be interesting to examine whether rhetorical moves in non-IMRD formatted RAs are similar to those that move-analysis researchers have thus far identified. In addition, this review argued that few studies have specifically targeted intradisciplinary variation. The few studies that have done so have revealed interesting differences, which would be worthwhile to continue investigating. Finally, part one argued more focus needs to be placed on move analysis methodology, particularly the grain-size of moves and steps as well as the emphasis placed on perlocutionary or illocutionary aspects when identifying moves and steps. In part two, the chapter argued that, while philosophical writing has been explored via various linguistic and rhetorical angles, there is still a need for an in-depth, comprehensive review of professional philosophical writing. The present study aims to address these shortcomings.

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CHAPTER 5 : METHODS

This chapter provides an overview of the methodology used in the study. The chapter begins with a description of the research questions. Next, the data collection procedures are discussed. The chapter then describes the steps taken for data analysis.

5.1 Research Questions

This dissertation will attempt to answer the following research questions:

6. What is the rhetorical structure of philosophical research articles written in English?

7. What linguistic features characterize rhetorical moves and steps?

8. To what extent is there variation in discourse structure across research traditions in philosophy (e.g., ethics v. history of philosophy)?

9. How does the discourse structure of philosophical research articles compare with research articles in other fields and disciplines (based on the extant move-analysis research)?

5.2 Data Collection

5.2.1 Overview of Corpus and Sub-Corpora

To investigate the research questions above, a corpus of philosophy RAs was compiled (see the Appendix). An overview of this corpus is provided in Table 5.1.

Table 5.1 Overview of the corpus

Aspect	Description
Size	60 Articles; 773,519 words; 12,891 words per article on average (including footnotes)
Disciplinary Topic	Ethics (20 RAs); history of philosophy (20 RAs); metaphysics & epistemology (20 RAs)
Journals	*Philosophical Review* (15 RAs), *Philosophy and Phenomenological Research* (15 RAs), *Nous* (15 RAs), *Mind* (15 RAs)

As can be seen, the corpus contains 60 RAs in philosophy, sampled from 3 broad areas of research (ethics, history of philosophy, and metaphysics and epistemology) and from four well respected journals in the field. For each area of research, 20 RAs were selected, 5 from each journal. Descriptions of the corpus by disciplinary topic and by journal are provided in Tables 5.2 and 5.3 below.

Table 5.2. Overview of corpus by disciplinary topics

Topic	Total word count	Mean article length (with footnotes)	Mean number of footnotes	Mean footnote total wordcount per article
Ethics	266,706	13,335.3	40.3	2,717.7
History of philosophy	255,304	12,765.2	45.45	2,871.3
Metaphysics & epistemology	251,509	12,575.5	31	2,138.55
Totals and Averages	*773,519*	*12,891*	*38.92*	*2,575.85*

Table 5.3. Overview of corpus by journals

Journal	Total word count	Mean article length (with footnotes)	Mean number of footnotes	Mean footnote total wordcount per article
Philosophical Review	240,871	16,058.07	44.8	3,444.33
Philosophy and Phenomenological Research	184,181	12,278.73	44	2,633.13
Nous	180,713	12,047.53	35.07	1,881.87
Mind	167,754	11,183.60	31.8	2,344.07
Totals and averages	*773,519*	*12,891*	*38.92*	*2,575.85*

As can be seen, with respect to topic, the sub-corpora are nearly equal in total and average word counts, although the average length of footnotes per article are notably lower in the metaphysics and epistemology sub-corpus than the others. When looking at the corpus with respect

to the different journals, it can be seen that the *Philosophical Review* tended to have longer articles and more extensive footnotes than the others. It should be noted that footnotes were included as part of the wordcount for the articles. This inclusion was motivated by the important role that footnotes play in philosophical writing. In fact, in certain articles, the total length of the footnotes was quite extensive, exceeding 6,000 words.

5.2.2. Target Representations of the Corpus

One important criterion to consider when building a corpus for move analysis is the representativeness of the corpus, i.e., how well the corpus represents the target genre and discipline (or sub-disciplines) (Graves et al., 2013; Li & Ge, 2009; Nwogu, 1997). The three broad areas of philosophical research in this dissertation (ethics, history of philosophy, and metaphysics and epistemology) aim to represent three disciplinary research traditions within philosophy. With respect to ethics and metaphysics and epistemology, the distinction between the traditions is concerned with the subject matter under investigation. On the other hand, articles in the history of philosophy, while dealing with topics in ethics and metaphysics and epistemology, are distinguished primarily by their aims and goals, which tend to address interpretive issues in historical writings.

A few qualifications should be noted about how well the corpus represents these research traditions. First, each tradition could be further parsed by making finer grained distinctions. For instance, ethics could be divided into research traditions that focus on metaethics (questions about the nature of ethical judgements), normative ethics (theories or arguments pertaining to what one ought to do or what sort of character one ought to have), and applied ethics (the application of normative ethics to specific ethical domains, such as medicine and the treatment of animals). Likewise, the history of philosophy could be parsed into different eras and epochs, for example, ancient philosophy, medieval philosophy, modern philosophy, etc. These rather coarse-grained traditions were selected to initially address the question of variation. If notable variation is found across these broad traditions, follow up studies can examine whether more fine-grained distinctions also yield variation. Second, with respect to metaphysics and epistemology, it should be noted that this term is actually a catch all to refer to metaphysics, epistemology, mind, and the philosophy of language. The motivation for including metaphysics and epistemology in a single category is that this is common practice in graduate programs when students complete area

requirements.[55] The inclusion of mind and philosophy of language was motivated by the close overlap that these topics often share with metaphysics and epistemology. Of course, it should be acknowledged that all three of these research traditions sometimes overlap. For example, someone researching an issue in metaethics may be concerned with the nature of actions and intentions, which deals with the philosophy of mind. Nonetheless, in order to examine whether the areas tend to rely on different rhetorical structures, they were separated for the purposes of this study.

It should also be noted that these three broad areas are not meant to comprehensively represent all of philosophical writing. Other areas include, for example, logic and the philosophy of mathematics. The motivations for selecting these three specific research traditions are the following:

- They are some of the most predominate and core areas of research in philosophy. This claim is supported both by examining the topics discussed in well-renowned philosophy journals as well as by looking at core areas of competencies targeted by graduated programs (discussed above).

- They represent areas of specialization which are frequently sought after in jobs. For instance, in 2016-2017, 33% of tenure track jobs were in Value Theory (i.e., ethics, political science, etc.), 12.3% in the history of philosophy, and 10% in the "core" (philosophy of language, metaphysics, and epistemology) (Weinberg, 2017).

- These represent philosophical domains that this author has some familiarity with, which will be helpful in carrying out the analysis.

5.2.3 Selection and Description of Journals

Because journals often have different publishing guidelines and disciplinary aims and goals, which can result in different rhetorical structures, four journals were selected for sampling articles. The selection of these four journals was based on their being top general journals[56] in the field of philosophy. Two criteria have typically been used for identifying and selecting top journals for a move analysis: (a) expert suggestions (e.g., Chang & Kuo, 2011; Cotos et al., 2015; Moreno & Swales, 2018) and/or (b) the use of journal rankings (typically based on impact factors) (e.g., Cotos et al., 2015; Del-Saz Rubio, 2011; Kanoksilapatham, 2005, 2015). For this dissertation, both

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[55] For example, these two topics are grouped into an area requirement at Purdue: https://www.cla.purdue.edu/academic/philosophy/documents/purdue_philosophy_graduate_manual_rev_2021.pdf
[56] By "general journals", I mean journals that publish on a wide range of philosophical topics and not those restricted to specific sub-topics. For this reason, a journal such as *Ethics*, which publishes only on topics pertaining to ethics, was not considered.

criteria were used. For the first criteria, a survey conducted by the Leiter Reports in 2018 (a professional philosophy blog that is well-known in the field) was consulted.[57] For the second criteria, (a) SCImago rankings as of June, 2020[58] and (b) Google H-5 Index for the years 2014-2018 were used.[59] A summary of the rankings for these items is provided in Tabled 5.4.[60]

Table 5.4 Rankings of selected journals based on different metrics

Journal	Leiter Survey Rank	SCImago Rank	Google H-5 Index
Philosophical Review	1	2	18
Philosophy and Phenomenological Research	5	10	4
Nous	3	1	2
Mind	2	4	11

The scope and aims of the journals were similar, as can be seen below in the statements taken from the publisher's websites:

- *Philosophical Review*:[61] "The journal aims to publish original scholarly work in all areas of analytic philosophy, with an emphasis on material of general interest to academic philosophers, and is one of the few journals in the discipline to publish book reviews."

- *Philosophy and Phenomenological Research*:[62] "Philosophy and Phenomenological Research is open to a variety of methodologies and traditions. This tradition of openness continues, as reflected by a statement appearing in every issue: PPR publishes articles in a wide range of areas. No specific methodology or philosophical orientation is required in submissions."

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[57] The results of the survey can be found here: https://leiterreports.typepad.com/blog/2018/11/best-general-journals-of-philosophy-2018.html

[58] SCImago rankings are based on a "prestige" metric as well as the number of citations for articles from a particular journal. Higher prestige journals are awarded more weight per citation.

[59] This is a measure of the citation impact of articles based on data from Google Scholar during a 5-year span (in this case, from 2014-2018).

[60] It should be noted that the Leiter Survey ranked "general" journals in the field. On the other hand, the SCImago and the Google H-5 Index included both general and specialist journals; thus, the rank of the latter two does not necessarily reflect their rank among generalist journals.

[61] https://read.dukeupress.edu/the-philosophical-review/pages/About

[62] https://onlinelibrary.wiley.com/page/journal/19331592/homepage/productinformation.html

- *Noûs*:[63] "Noûs, a premier philosophy journal, publishes articles that address the whole range of topics at the center of philosophical debate, as well as long critical studies of important books."

- *Mind*:[64] "MIND is well known for cutting edge philosophical papers in epistemology, metaphysics, philosophy of language, philosophy of logic, and philosophy of mind. The editorial team aspires to preserve this tradition in analytic philosophy, but also to enrich and broaden it."

One notable difference is that two of the journals (*Mind* and *The Philosophical Review*) focus on analytic philosophy while *Philosophy and Phenomenological Research* makes explicit reference to being open to a variety of research methodologies and traditions. Analytic philosophy refers to a philosophical movement traced back to the turn of the 20th century to philosopher such as Bertrand Russell and G. E. Moore. The movement is not so much characterized by its topics of investigation as much as by its methodologies and underlying assumptions. This movement is typically contrasted with continental philosophy (e.g., phenomenology, existentialism, and critical theory).[65] Differences between these research traditions (i.e., analytic and continental philosophy) were not used as a criterion for article selection. In part, this is because the distinction between these traditions is often not clear, and thus it would be challenging to accurately identify articles that properly belong to each.

A few other points about the journals are worth highlighting. First, most of the journals made no mention of length requirements, save *Mind*, which recommended that articles be 8,000 words or less (excluding footnotes). Second, all four journals have a triple-blind review process. This means the identity of submitting authors is not disclosed to both reviewers and the editor. Finally, all the journals have a relatively low acceptance rate, particularly *The Philosophical Review*. Data about submission information for 2011-2013 can be found in Table 5.5 below.

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[63] https://onlinelibrary.wiley.com/page/journal/14680068/homepage/productinformation.html
[64] https://academic.oup.com/mind/pages/About
[65] For an overview of this distinction, see the article by Brian Leiter (2006), Professor of Jurisprudence at the University of Chicago. In addition, an article from the Internet Encyclopedia of Philosophy provides a more elaborate and technical characterization (Preston, 2020).

Table 5.5. Submission and acceptance rates for journals

Journal	2011	2012	2013
Philosophical Review	475 submissions 2.5% acceptance	500 submissions 2.4% acceptance	600 submissions 2% acceptance
Philosophy and Phenomenological Research	464 submissions 9% acceptance	427 submissions 8% acceptance	410 submissions 7% acceptance
Nous	303 submissions 7% acceptance	339 submissions 9% acceptance	320 submissions 9% acceptance
Mind	533 submissions 5% acceptance	515 submissions 4% acceptance	450 submissions 6% acceptance

5.2.4 Article Selection Criteria

When selecting specific articles for a corpus, move analysis studies have considered factors such as (a) years of publication (Saber, 2012), (b) article length (e.g., Li & Ge, 2009), (c) writing quality (e.g., Moreno & Swales, 2018), (d) format (e.g., Mizumoto et al., 2017), (e) research methodology (e.g., Lim, 2010), and (f) author background (e.g., native-speaker status) (e.g., Li & Ge, 2009). For this dissertation, some of these criteria were not considered relevant. Specifically, (b) article length was not considered, for outside of practical considerations, there was no reason to rule out specific articles based on length; (c) writing quality was not considered, for the fact that the article was published in a high ranking journal suggests that the writing quality was deemed sufficient; (d) format was not considered, for there is no conventional format followed in philosophical articles; and (e) author background was not considered, for this dissertation does not attempt to characterize writing practices based on attributes of the author (such as their native speaker status). The following criteria were used to select articles for the corpus.[66]

- *Research tradition:* As was noted above, 3 specific research traditions were targeted. To select articles that fit one of these categories, article titles, abstracts, and introductions were consulted.

- *Topic variation within traditions:* To assure for variation within research traditions, articles on similar topics were avoided. For example, when selecting articles from within the ethics tradition, if two articles dealt with, say, the topic of free will and moral responsibility, only one was selected in order to sample from other topics. Nonetheless, it should be noted that in the history of philosophy, sometimes selecting from similar topics was unavoidable due

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[66] Some of these criteria are based on Stoller and Robinson (2013).

to a limited number of selection options. In particular, multiple articles on Immanuel Kant were selected.

- *Currency*: Only articles published since 2015 were selected. This decision was motivated by the fact that discourse conventions often change over time.

5.2.5 Sample Size

For this study, 60 RAs were selected. In comparison to similar move analysis studies on RAs, this study falls near the median in terms of its total sample size. Nonetheless, it should be noted that studies using move analysis research can range considerably, from a low of 10 articles (e.g., Basturkmen, 2012) to a high of 900 articles (Cotos et al., 2015, 2016, 2017). An overview of move analysis sample sizes can be found in Table 5.5 below.

Table 5.6 Sample sizes for move analysis studies

Study	Focus	Sample Size
Basturkmen (2012)	Discussion sections in dentistry RAs	10
Cotos et al. (2015, 2016, 2017)	Complete RA structure across 30 disciplines	30 for each discipline (900 total)
Del-Saz Rubio (2011)	RAs introductions in agricultural sciences	28
Graves (2013)	RAs in mathematics	30
Hashemi & Moghaddam (2019)	Discussion sections of RAs in applied linguistics	38
Kanoksilapatham (2015)	RAs in three engineering disciplines	60 for each discipline (180 total)
Kwan et al. (2012)	Evaluations in literature reviews	80 (40 from two sub-paradigms)
Lim (2010)	Commenting on research results in applied linguistics and education RAs	15 from each discipline (30 total)
Peacock (2011)	Methods sections in RAs across 8 disciplines	36 from each discipline (288 total)
Tessuto (2015)	Complete RA structure in law RAs	90
Averages		*42 per disciple (167 per study)*

As can be seen from the table, this study has a larger than average sample size when considering sample size per discipline represented, while it has a smaller than average sample size when considering sample size per study. Nonetheless, it should be noted that, when removing Cotos et al. (2015, 2016, 2017) (which had a very large simple), the study lies closer to the mean in terms of sample size per study ($\bar{x}$ = 86 articles per study with Cotos et al. removed).

The sample size selection for this move analysis study was affected by the following considerations:

- *Generalizability*: While 60 articles is a somewhat small sample, this should allow for cautious generalizations about writing practices.

- *Saturation point*: The saturation point is the point at which a researcher has identified the full range of move and step options that occur in a genre. In other words, this is the point at which no new moves or steps are identified by the researcher. For Moreno and Swales (2018), this occurred after analyzing 20-30 articles (which varied in regard to the section analyzed), while for Hashemi and Moghaddam (2019) this occurred at 38 articles. Reaching the saturation point is important for assuring that an adequate characterization of possible rhetorical structures can be given.

- *Pragmatic factors*: Move analysis research is labor intensive, requiring manual coding and cognitive judgements on the part of the researcher (explained below). This can result in constraints on how large a sample a researcher can code. For this corpus, the average article is approximately 13,000 words (including footnotes); thus, a larger sample was somewhat impractical.

5.2.6 Data Conversion

To build the corpus, articles were downloaded as PDFs from the publishers' websites and then converted into .txt files. The files were then cleaned to remove titles, abstracts, and header and footer information. The cleaned files were then uploaded to *Nvivo*, the software used for coding (described below).

5.3 Data Analysis

5.3.1 Methodological Framework: Move Analysis

This study employs *move analysis* as the primary methodological framework to investigate philosophical writing. According to Swales (2004), *moves* can be defined as segments of a text that perform "coherent communicative functions" (p. 228-229). In other words, moves are roles

that specific parts of a discourse play within the larger discourse. They are "coherent functions" because, while each move plays its own individual role, at the same time, moves coalesce to advance more over-arching discourse goals. Such goals can either be a text's primary purpose or the purpose of a sub-section, such as the introduction or methods section. The conventional and typified discourse structure that results from the combination of move sequences is referred to as the *cognitive structuring* of a genre (or *rhetorical structure* or *schematic structure*, depending on different move analysis frameworks and authors) (Bhatia, 1993).[67]

Discourse moves, in turn, can be analyzed into component parts, referred to as *steps* (Swales, 1990) or *strategies* (Bhatia, 1993).[68] According to Biber et al. (2007), "[t]he steps of a move primarily function to achieve the purpose of the move to which it belongs" (p. 24). In other words, steps are the specific means by which an author accomplishes a rhetorical move. For example, in Swales' (2004) introduction model for RAs (discussed in detail in Chapter 4), there are three main moves: (1) *establish a territory*, where the researcher makes clear the broad topic of their research; (2) *establish a niche*, where the researcher carves out a specific area in need of research attention; and (3) *occupy the niche*, where the researcher situates their research within this niche. Two means by which an author can accomplish move 2 (i.e., two "steps") include (a) *indicating a gap*, where the author notes a lack of research attention paid to a certain topic or issue, and (b) *adding to what is known*, where the author builds upon and extends existing research trends.

Abstracting from specific examples, Figure 5.1 below shows a model of the generic cognitive structure of genres based on Swales' (1990; 2004) and Bhatia's (1993) frameworks. The model shows that the entire structure works together as a means of achieving some textual purpose (either the main purpose of the text or the purpose of a sub-section). In the case Swales' (2004) RA model for introductions, for instance, the purpose of the introduction is to *create a research space*. This, in turn, helps the reader to advance the overarching goal of the text as a whole, which, for RAs, could be characterized along the lines of *creating knowledge*.[69] In this respect, one could aptly refer to sections and sub-sections as "macro-moves". Because the IMRD format of articles

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[67]The different choices of terminology here partly reflect the difference between focusing on the perlocutionary and illocutionary aspects of moves, discussed below.

[68] The terminology is not always consistent in move-analysis research. Samraj (2014) notes, for instance, that some authors have adopted "strategy" as a term for non-sequential and non-obligatory constituents of moves while "steps" are used for constituents that are sequential and obligatory.

[69] The research article considered as a genre of its own may be too generic to provide a precise characterization of its purpose; rather, "sub-genres" of the RA, such as a theoretical piece or an empirical report, may allow for more precise characterizations of the generic purpose.

is highly conventional, a focus on macro-moves is not usually warranted; however, philosophy does not employ such a conventional discourse structure. Thus, this dissertation will focus a considerable amount of attention not just on moves and steps as traditionally understood in move analysis, but also on the macro-moves that are made in the discourse.
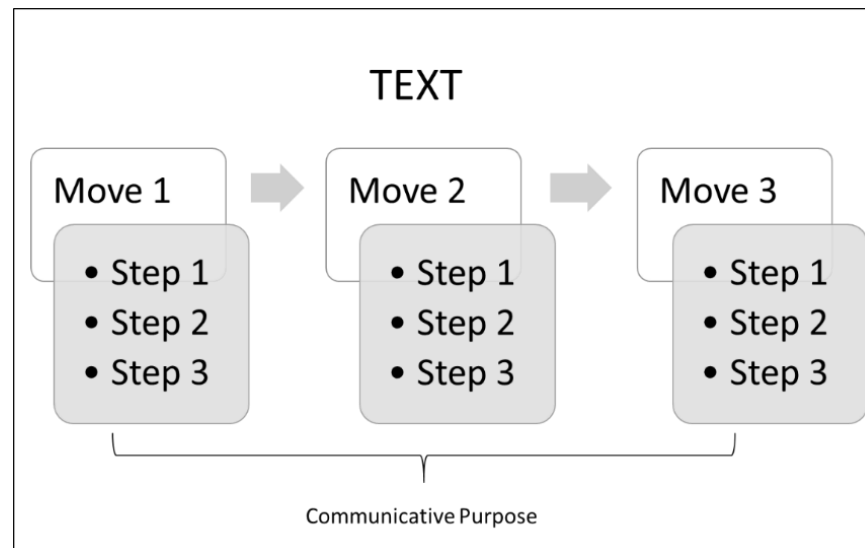
Figure 5.1. The rhetorical structure of a text according to Swales (1990; 2004) and Bhatia (1993)

A few other points about Figure 5.1 are important to note. First, moves tend to have sequential relations to one another, indicated by the arrows. Nonetheless, these arrows are not meant to suggest that a certain order is obligatory in the respect that the order occurs in every text of a genre. For instance, while Swales' (2004) RA introduction model suggests an ordering of Move 1 → Move 2 → Move 3, other variations are possible, e.g., Move 3 → Move 1 → Move 2. Second, a single or several steps can be used as a strategy for advancing a single move. Thus, for example, an author could carry out Move 1 by simply using Step 1 or by using Steps 1 and 2 or Steps 1, 2, and 3, etc. Move analysis models often use "or" in an exclusive sense to indicate that, if an author uses one step in carrying out a move, it is unlikely they will use another. Finally, it should be noted that the number of moves and steps selected to represent this model is completely arbitrary: The number of moves and steps could be reduced or expanded depending on how fine or coarse-grained the researcher wishes to make their model (an issue taken up in more detail below).

Two other points are worth highlighting in regard to move analysis. First, researchers can classify moves as *obligatory, conventional*, or *optional* depending on how frequently they occur in the corpus analyzed (Biber et al., 2007). Previous research has not agreed over how to use these labels. Kanoksilapatham (2015), for instance, held that a move was optional if it was used in less than 60% of texts, conventional if used between 60%-99% of texts, and obligatory if used in 100% of texts. On the other hand, Li and Ge (2009) held that a move was optional if it was used in less than 50% of texts and obligatory otherwise (the "conventional" label was not used). For this dissertation, the following criteria will be used:

- **Obligatory**: A move or step is used in 100% of the texts

- **Conventional**: A move or step is used in 50% or more of the texts (but less than 100%)

- **Optional**: A move is used in less than 50% of texts.

The second point is that there is no specific limit on how many times a move can be used within text or text section. When moves are reused in sequences (e.g., Move 1 → Move 2, Move 1 → Move 2), this repeated pattern is referred to as a "move cycle" (Samraj, 2014). For example, Basturkmen (2009) documented that in language teaching RAs, discussion sections typically employ cycles of Move 3, *reporting a result*, followed by Move 4, *commenting on the result*. For this dissertation, macro-move cycles will be a specific point of interest.

5.3.2 Data Analysis Procedures and Coding

The data analysis was carried out via three phases, following Cotos et al. (2017) and Biber et al. (2007). This process is summarized below in Table 5.7.

Table 5.7. Data Analysis Procedures. Based upon Cotos et al. (2017) and Biber et al. (2007)

Phase	Steps and Descriptions
(1) Develop Model	*Step 1*: Identify the main purpose(s) of the genre and text sections. *Step 2*: Segment exemplar texts into functional units. *Step 3*: Develop model of possible steps and moves by grouping and categorizing the functional units.
(2) Test Model	*Step 4*: Test model on pilot sample of texts to assure saturation has been reached and to fine-tune move and step definitions. *Step 5*: Refine model by developing precise protocols for classifying moves and steps.
(3) Apply Model	*Step 6*: Apply model to code entire corpus. *Step 7*: Conduct linguistic analysis, identifying linguistic features of moves and steps.

In the first phase, a move analysis codebook was developed. Because philosophy RAs do not follow a conventional IMRD format, this required reading several philosophy texts to identify the main purpose and the typical marco-moves of the genre (step 1). It is worth noting that macro-moves could not be identified by section headers, for in philosophy RAs, section headers are most frequently used to identify the topic or content of the section and not the rhetorical function being carried out. While this is not universally the case, as some RAs do contain section headers that pick out specific rhetorical functions (e.g., *objections and replies*), such headings are by no means conventional. As a result, the macro-moves had to be identified by reading the sections and considering the main rhetorical aim(s) of the section.

Once this was complete, a sample of the corpus was used to segment the macro-moves into smaller functional units, which correspond to moves and steps (step 2). By and large, this was done inductively, meaning there was no pre-established move analysis framework used to segment the moves. Nonetheless, segmenting the introductions was informed by Swales' (1990; 2004) models as well as proposals in Samraj (2008, 2014) and Peters (2011). Furthermore, Geisler's (1994) proposed model of philosophical discourse (path/faulty path) and Bloor's (1996) philosophical strategies also informed this initial segmentation process.

Overall, the segmentation procedures of this dissertation align with those discussed in Moreno and Swales (2018). This involved identifying and demarcating discrete functions that occur within the text that help to advance macro-moves and the text's overall purpose. A few points are worth emphasizing about the segmentation procedures. First, the segmented fragments

were identified on a functional basis. This means that the fragments are not equatable with formal linguistic units, such as sentences, phrases, or paragraphs, although these can be helpful borders for identifying moves and steps (discussed below). A single sentence can, for example, contain multiple functions. For instance, consider the following example:

1. This proposal, then, is a particular challenge because, on its account, Rosa's decision to help Clara, though not a decision to defer to Clara's judgment, nevertheless seems to take Clara seriously as a fellow agent (Koltonski, 2016, pp. 486–487).

In this example, the first clause ("This proposal, then, is a particular challenge") was fragmented as a discrete unit from the because-clause ("because, on its account, Rosa's decision to help Clara, though not a decision to defer to Clara's judgment, nevertheless seems to take Clara seriously as a fellow agent"), for the function of the first fragment is to *make an inference* (the author is concluding here why a particular view is a challenge to their account) while the function of the second fragment is to *explain or justify* that inference (the author is giving an explanation as to what, in particular, makes the objection potent).

Second, following Nwogu (1997), the following linguistic cues were used to help identify functional break-points:

- Signal phrases and what Hyland (2005) calls "frame markers" (linguistic units that refer to discourse acts and text stages): For example, "**to conclude**", and "**to summarize**" announce the discourse act being carried out by the writer.
- Lexical items that are suggestive of the function being carried out: For example, in the phrase "a **worry** with my account…", "worry" indicates that the author is going to *give an objection*.
- Cohesive devices and transitions: For example, "because" indicates that an author will *explain* or *justify a position*.

In step 3, the identified functional units were grouped together and split apart in a recursive process until it seemed that the saturation point had been reached. At this point, the initial codebook was finalized. Five macro-moves were identified, which are discussed in detail in upcoming chapters. It should be noted that this codebook differs from other move analysis studies in that the codebook contains more than 2 layers of functions, that is, it is not just comprised of moves and steps, but also contains macro-moves as well as what can be referred to as "sub-steps" or "strategies". An example of the multiple layers of functions can be seen in Figure 5.2 below.
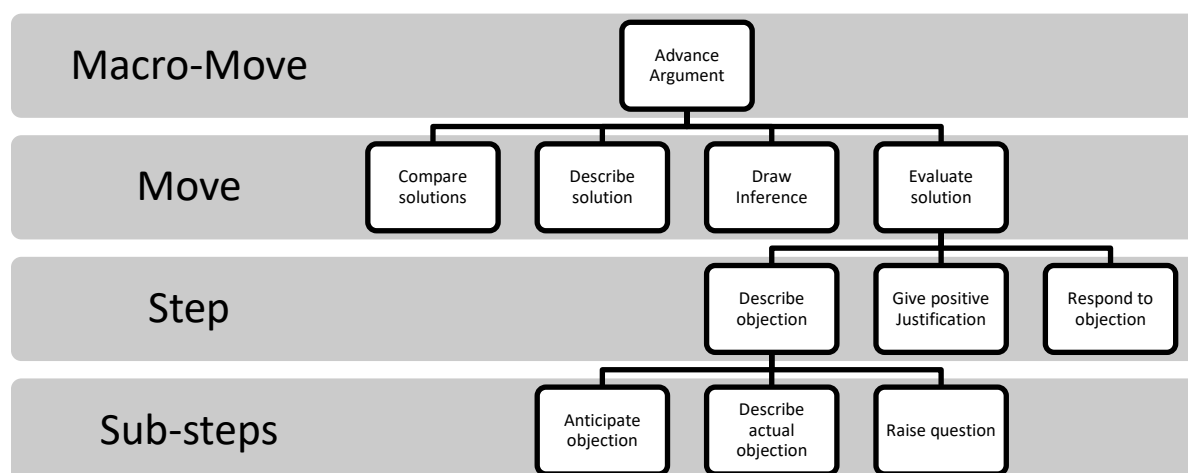
Figure 5.2. A four-layer functional model[70]

As can be seen in the figure, the macro-move is *advancing one's own philosophical argument*. This is comprised of several moves, such as *comparing one's solution to others*, *describing one's solution*, *drawing inferences (about one's solution)*, and *evaluating one's solution*. This last move—*evaluating one's solution*—can, in turn, be broken down into several steps: (a) *describing an objection, issue, or question*, (b) *giving positive justification for one's solution*, and (c) *responding to objections*, among others. Finally, *describing an objection* has several sub-steps, including (a) *anticipating an objection*, (b) *describing an actual objection*, and (c) *raising a question*.

Once the codebook was developed, it was then applied to another sample of the corpus to assure that the saturation point had, in fact, been reached and to assure that codes were fine-tuned (step 4). Once this was complete, specific procedures were developed for dealing with problematic cases (step 5). As noted above, for example, multiple codes can sometimes be applied to a single sentence. At the clause-level, there is typically only one function per clause; however, here too occasionally multiple functions are present. For instance, consider the following example:

2. Conversational exculpature, the pragmatic subtraction of content, stands opposed to conversational implicature, if the latter is viewed as the pragmatic addition of content (as in Kent Bach's influential taxonomy [Bach 1994]) (Hoek, 2018, p. 152).

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[70] This is only a partial representation of the model. Several functions have additional nodes not represented in the diagram.

In this example, the if-clause—"if the latter is viewed as the pragmatic addition of content (as in Kent Bach's influential taxonomy [Bach 1994])"—arguably contains two functions: The first function is *drawing an implication*, for the if-clause is used as part of an if-then statement to note the result of understanding conversational implicature in a particular way.[71] The other function occurs in the parentheses: The author *makes reference to another work* ("as in Kent Bach's influential taxonomy [Bach 1994]"). Despite there being two distinct functions here, for practical purposes, it was not feasible to differentiate functions at the sub-clause level. In such cases, the over-arching function of the clause was the only function coded. Thus, for such cases, a procedure of "one-clause, one-code" was followed. Additional issues and resolutions are discussed below in Section 5.3.4.

In phase 3, the refined model was applied to the entire corpus of articles using *Nvivo* (described below) (step 6). The final step involved analyzing linguistic features using Antconc, a free text-analysis software.[72] During this process, all of the text segments belonging to a particular function (e.g., to a particular move) were amalgamated into a single text file. Next, pre-designed programs in Antconc were used to search for linguistic points of interest, such as n-grams and keywords.[73]

5.3.3 Description of Software for Analysis

When coding for rhetorical functions, NVivo, a software package for qualitative research, was used. The first step in using NVivo was to translate the codebook described above into NVivo using the *nodes* feature. In NVivo, nodes are collections of textual references in regard to some theme being coded for (the themes, in this case, are the rhetorical functions). Each node is given a brief name and can be given a more elaborate description, as shown below in the example of a macro-move node (Figure 5.3).

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[71] If-then statements were always coded as a single function, even though there are two distinct clauses.
[72]http://www.laurenceanthony.net/software/antconc/
[73] These concepts are described in Chapter 4.

Figure 5.3. Example of a macro-move node in NVivo

Nodes can be embedded within one another. For example, several *steps* can be embedded within a *move* node. This helped to expediate the coding process. Figure 5.4 below shows an example of this embedding.
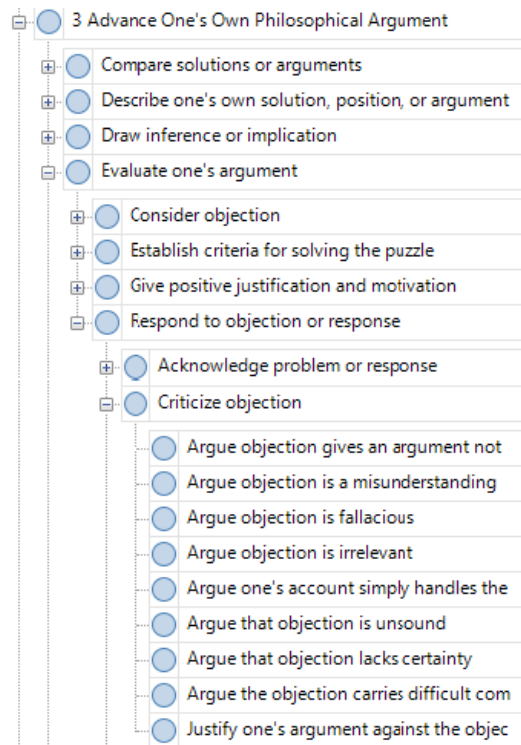
Figure 5.4. Embedding nodes in NVivo

As can be seen in the figure, the macro-move node is *advancing one's own philosophical argument*. This, in turn, has several embedded nodes (i.e., moves), such as *comparing solutions*, *describing one's own solution*, *drawing inferences*, and *evaluating one's argument*. These, in turn, have embedded moves as well (shown in the figure). Whenever an embedded move is coded in the text, this will automatically code that text segment as belonging to the more overarching function as well. For instance, if a text segment is coded as *criticizing an objection*, this will automatically code that segment as also belonging to *responding to an objection*, *evaluating one's argument*, and *advancing one's own philosophical argument*.

After creating this embedded codebook, the entire philosophy corpus was imported into NVivo, and then each text was coded by highlighting the relevant portions of the text and tagging them with their appropriate nodes. An example of this process is shown in Figure 5.5.
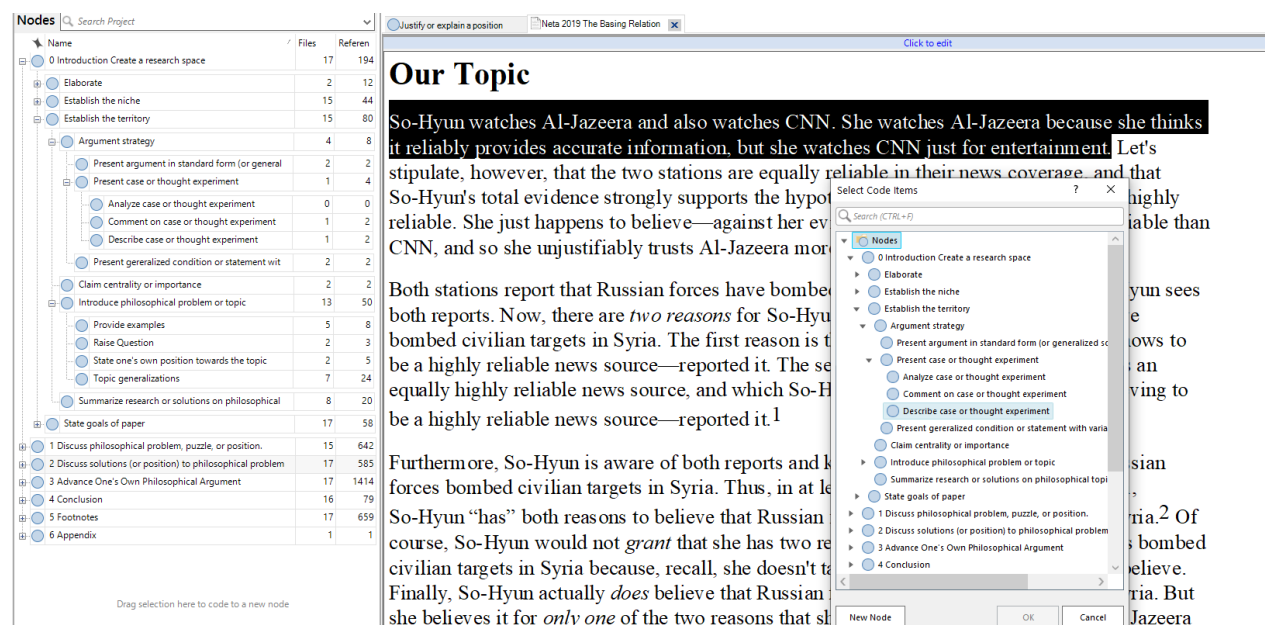
Figure 5.5. Example of coding in NVivo

In this example, the highlighted portion of the text (in black) is being coded as *describe case or thought experiment* in the "select code items" dialogue box. Alternatively, the highlighted portion can simply be dragged and dropped into the appropriate node on the left-hand side of the window. As this text segment is the opening lines of the essay, this thought experiment is being coded as the move *establish the territory* in the macro-move *introduction*.

NVivo also helped to keep track of information about the frequency and pervasiveness of the rhetorical functions. On one hand, NVivo keeps logs of the total number of files that contain at least one instance of a particular function. Thus, for example, the software keeps track of how many files use the move *establish the territory*, which, when divided by 60 (the total number of files in the corpus), yields the percentage of texts in the corpus that make use of this move. In addition, NVivo automatically calculates the percentage of a given text that is comprised of a given node (i.e., rhetorical function). For example, if the introduction made use of the move *establish the territory*, NVivo automatically calculates the total percentage of that text comprised of this move (calculated by taking the total number of characters in this instance of the move divided by the total number of characters in the text).

5.3.4 Methodological Issues and Solutions

This section will discuss several methodological issues and solutions.

5.3.4.1 Granularity Size

As is evident from the literature review in chapter 4, most move analysis research on RAs has been conducted on articles that follow the IMRD format. As a result, the granularity size of the rhetorical functions—i.e., how general or specific—has not tended to be an issue. Most outstanding, what has been referred to as "macro-moves" are typically already clearly demarcated in these texts based upon the section headers. For instance, the discussion section aims to add commentary on the results of the study; the methods section aims to explain the methodology; etc. Furthermore, sub-sections also sometimes provide researchers with predetermined grain-sizes to use for rhetorical functions. For instance, in the methods section, this could include moves like "data collection procedures" and "data analysis". For the philosophy RAs, the headings and sub-headings provided no such predetermined grain sizes to work within. As a result, this required first determining the macro-functions of the philosophy RA genre before determining grain sizes typically referred to as "moves" and "steps".

At the other end of the spectrum, it was also difficult to determine when to stop making finer and finer distinctions for rhetorical functions. On one hand, this is a difficulty for all move analysis research, for it is often the case that fine-grained distinctions can be made with respect to

different strategies that are used to accomplish steps. For instance, Wang and Yang (2015), discussing the step *claiming centrality* in RA introductions in applied linguistics, identify several types of appeals used when completing this step, such as appeals to salience and appeals to magnitude. Arguably, these appeals are just strategies that authors use to accomplish this step, and thus they can be considered a more finely parsed rhetorical function. On the other hand, the difficulty of finely parsing functions is somewhat specific to philosophical argumentation, for philosophy involves the analysis and evaluation of arguments, which can occur in a recursive process and can become several layers deep. For example, when *describing an objection*, authors typically employ functions such as *summarizing the objection*, *giving examples*, *drawing implications*, etc. Once the objection is described, the author then will typically *respond to the objection*, which involves advancing their own argument. This response to the objection, in turn, can be objected to, which once again can be broken down into the functions noted above. At some point, however, demarcating all of these functions causes a rather unmanageable number of layers to be added to the codebook. For the sake of simplicity, this level of specificity was ignored. Typically, the sub-step level (see Figure 5.2) was the most finely parsed layer of the codebook.

Another issue encountered was that there were often multiple ways of parsing a function into incongruous sub-functions. This is the case when building any taxonomy of concepts. For example, the category CAR can be broken down into sub-categories based on aspects such as color, manufacturer, and shape. These sub-categories will not neatly divide into exclusive sets; rather, the members belonging to the sub-categories will overlap. For example, a car belonging to the subset RED CAR may belong to the subset FORD while another member of RED CAR will belong to TOYOTA. This poses the following issue when parsing this concept: Which of the aspects will be used to determine the sub-categories? In the case of building the philosophy codebook, this same problem arose. For example, *describing an objection* is a common step for the broader move *evaluating one's argument*. This step can be further broken down based on multiple aspects, two of which are (a) the objection strategy used, such as *objecting that the account is unsound*, *objecting that the account is inconsistent*, *objecting that the account is incomplete*, etc., and (b) the source of the objection, e.g., *hypothesizing an objection* or *summarizing an actual objection*. Thus, the question arises: Which aspect should be used to determine the sub-categories?

On one hand, one could attempt to build a codebook that incorporates both aspects. This, however, would lead to a proliferation of functions, and it would require double-coding text segments. For example, consider the following text fragment.

3. This proposal may strike some philosophers as metaphysically odd: how can the exercise of a disposition be individuated by our representing that very exercise in thought? Doesn't the exercise have to occur independently of the representation in order to be represented? (Neta, 2019, p. 209).

In this segment, the author has advanced their philosophical solution to a puzzle and is now considering an objection to their view in the form of a question. If both of the two sub-steps from above were to be included in the codebook, this would require coding this text segment twice: First for the objection strategy used (in this case, *objecting the account is unsound*, since the posed question suggests that one of the premises in the argument is false) and second for the source of the objection (in this case, *hypothesizing an objection*, since the objection is not attributed to any specific person). While for this specific example, it may seem tractable to assign multiple codes in this way, for other cases, there are additional sub-steps that could be added, making the task for the coder even more unmanageable. The solution to this problem was pragmatic and not ideal: The sub-steps that were coded for were selected based upon those that were deemed to be most salient and those that were deemed to provide the greatest potential pedagogical insights.

5.3.4.2 Principles for Establishing Functional Categories

As discussed in the literature review in Chapter 4, one reason that move analysis frameworks can vary considerably from author to author is that different principles are used for demarcating moves and steps. Specifically, authors have used the *illocution*, *perlocution,* and *content* to identify moves and steps. A brief explanation of these three principles is in order. The last of the principles, content, refers to the use of some over-arching topic to specify moves and steps. For example, in Peacock's (2002) framework for discussion sections, some moves are labeled solely according to content, such as *finding* and *unexpected result*. When content is used as a demarcation principle, any functional unit that falls outside of the specified topic is not grouped into that move or step. The other principles—*illocution* and *perlocution*—have been discussed at length in Chapter 3. As a quick recap, the illocutionary aspect of a rhetorical function (or genre) refers to *what* the language user is doing (e.g., promising, describing, stating,

disagreeing, etc.) while the perlocution describes *why* the language user is doing what they are doing. In other words, the perlocution is the aim or intended effect (e.g., to convince someone of something or to get someone to do something).

It would seem that the illocutionary aspect of rhetorical functions in combination with content have been employed as the predominate principles used to demarcate moves. This can be observed in numerous move frameworks. For example, Yang and Allison (2003) include moves such as *reporting results*, *commenting on results*, and *evaluating the study*, where each move label identifies what the language user is doing as well as the broad topic the move is concerned with. Kanoksilapatham (2015) also frequently uses these principles in move labels, e.g., *reviewing the present study* and *stating limitations and future research*. On the other hand, some authors have used perlocutionary factors to demarcate moves and steps. This is most apparent in certain moves in Swales' (1990; 2004) introduction framework as well as Cotos et al.'s (2015) RA framework. For example, Cotos et al. (2015) identify discussion section moves such as *re-establish the territory* and *framing new knowledge*. It would seem that such move labels are best interpreted as pointing to the *why* of the rhetorical function, that is, they pick out the characteristic aim of the rhetorical move.

While content is normally always a factor when demarcating a move or step, move analysis frameworks typically either rely on the illocution or perlocution, but not both. This raises challenges for move analysis research. First and foremost, researchers must decide which of the two factors to rely upon. One or the other may be targeted for practical reasons or due to specific research purposes. For instance, one author may be interested in the rhetorical effects that writers wish to have on their audience (perlocution) while another may be interested in the typical speech acts that writers most frequently engage in (illocution). Second, frameworks should be consistent at each functional level in regard to whether the framework relies upon illocutionary or perlocutionary aspects to demarcate the functions. The problem with being inconsistent at a specific functional level is that this can lead to conflating and overlapping functions. For example, suppose when analyzing a discussion section, a researcher first uses a perlocutionary aspect to identify a move—e.g., *building credibility for the study*. Suppose the researcher then demarcates another move (at the same functional level) relying on an illocutionary aspect—e.g., *evaluating the study*. The problem is that sometimes a chunk of language used for *building credibility* can

also be used for *evaluating a study* (e.g., an author can evaluate a study in order to build credibility). Thus, this will result in coding issues for the researcher.[74]

For this study, illocutions and content were used as the core principles for demarcating macro-moves, moves, steps, and sub-steps. The motivation behind this selection was pragmatic: illocutions tend to be more transparent and easily identifiable than perlocutions, which can present considerable interpretation difficulties.[75] Nonetheless, perlocutionary aspects of move and steps will be discussed in upcoming chapters when interpreting the results.

5.3.4.3 Two Kinds of Functional Parts

In a certain respect, a move analysis can be viewed as a part-whole analysis of discourse: A text is broken down into increasingly more fine-grained sub-functions, all of which help to advance the overarching goal of the discourse. An issue that arises when conducting a part-whole analysis is that there are multiple types of *parts*. As noted by Croft and Cruse (2004), one can distinguish between *segmental* and *systemic* parts. Segmental parts are those with clear spatial boundaries with respect to one another within an object. For instance, with respect to a body, segmental parts include the head, legs, arms, etc. Systemic parts, on the other hand, permeate throughout an object. For a body, systemic parts include the skeletal and the nervous systems, among others. Importantly, systemic parts can overlap with one another and are not necessarily discrete and separate in a given spatial region. For instance, many areas of the body contain both pieces of the skeleton as well as the nervous system. Furthermore, systemic parts overlap and interpenetrate segmental parts. Pieces of the skeletal system can, for instance, be found in the arms, legs, and head.

Switching from the body to a text, a similar distinction can be drawn: Some parts of a text are segmental, in that they have clear spatial boundaries and are separate from other text segments; others are systemic in that they permeate the text and are not confined to a particular textual region. Generally speaking, a move analysis focuses on identifying segmental parts. In Swales' (1990;

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[74] Nonetheless, it does not necessarily seem to be an issue if a researcher switches from relying on perlocutionary to illocutionary aspects at different functional levels. For example, Swales' (1990) introductory framework uses perlocutionary aspects to identify moves and illocutionary aspects to identify steps. For instance, *establishing a niche* (a perlocution) involves *indicating a gap* (an illocution). For this specific model, it may be the case that Swales has simply separated out these two rhetorical functions, noting multiple illocutions by which an author aims at some perlocution.

[75] For example, see Askehave and Swales (2001), discussed in Chapter 3.

2004) Create a Research Space model for RA introductions, for instance, the moves have clear spatial boundaries and do not overlap. In other words, for a given text segment of an RA introduction, it either (in an exclusive sense) belongs to Move 1, Move 2, or Move 3. However, in some cases, move analysts have identified what appears to be best described as systemic parts. For example, Moreno and Swales (2018) include two "functions" in their discussion section model (which are contrasted with "moves" and "steps"): (1) an *announcing* function, where the author(s) provides a preview of what is to come and (2) an *elaborating* function, where the author(s) adds elaboration via paraphrases, examples, etc. One of the challenges of using such functions in a move analysis model is that they do not have the spatial discreteness of other moves and steps, for *announcing* can be used to preview any move or step and *elaborating* can be used to add elaboration to any move or step. Thus, it would seem apt to consider these as systemic parts since they are not localized to any particular region but are dispersed and permeate the text and occur within the confines of other moves and steps.

It may seem that one solution for a move analysis methodology is to simply keep segmental and systemic parts separated. While this may not be difficult to do when constructing an abstract move analysis framework, in practice the following problem arises: Since the systemic parts interpenetrate segmental parts, it can be challenging to both (a) identify any given segment as belonging to either a segment or a systemic part and (b) to construct nodes in software such as Nvivo that reflect these distinctions. With respect to the first issue, consider again the body analogy: If the body is analyzed into finer and finer-grained segments, one eventually begins to discover segments that also happen to be connected with systemic parts. For example, a hand contains several types of bones, such as knuckle bones. Are knuckle bones best identified as segmental parts of the hand or as part of the broader skeletal system? Conceptually, it would seem that there is overlap here and that knuckle bones could be identified as both a segmental part and as a part of a systemic part.

When analyzing a text, a solution to this issue is to simply classify such overlapping text segments as being both segmental and systemic parts, as in the example above; however, this leads to the second issue—the software issue. Due to how Nvivo works, it is not possible to build a framework in which some nodes function as systemic nodes that interpenetrate segmental nodes. Nonetheless, an ad hoc solution was created that appears to allow for a potential workaround (explained below).

For this dissertation, rhetorical functions were identified that belong to both types of parts. While the majority of the functions can be considered segmental in nature, several are systemic, including announcing and elaborating functions, described by Moreno and Swales (2018). Other systemic functions include case studies or thought experiments, which can be used in combination with numerous rhetorical moves, such as *summarizing a position*, *advancing one's argument*, and *evaluating one's argument*. Finally, the codebook includes what I refer to as "argumentative strategies", which also are best described as systemic parts rather than segmental. These argumentative strategies include functions such as *presenting an argument in standard form* and *presenting a generalized proposition with variables*, both of which can be found in various places throughout the text and are embedded within other moves and steps.[76]

To solve the software issue, systemic parts were embedded as sub-nodes for moves. This required creating a large number of duplicate nodes for systemic parts, as each move needed to include all possible systemic functions. While such functions may appear to be steps in the hierarchy, all these functions were amalgamated at the end of the coding process. This made it possible to represent the full extent of the systemic function and made it possible to see how these systemic functions relate to moves and steps. Figure 5.6 below shows a model of how systemic parts were built into the codebook in Nvivo.

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[76] *Presenting an argument in standard form* is when an author puts an argument into premise-conclusion form, clearly identifying these two parts of an argument. For example, the following is a standard form rendition of an argument:
    (1) All humans are mortal.
    (2) Socrates is human.
    (3) Therefore, Socrates is mortal.
Presenting a generalized proposition with variables is when an author abstracts from specific instances and presents a proposition using variables, as in mathematics. For example, "for all x, if x is human then x is mortal", where "x" is a variable standing for all individuals.
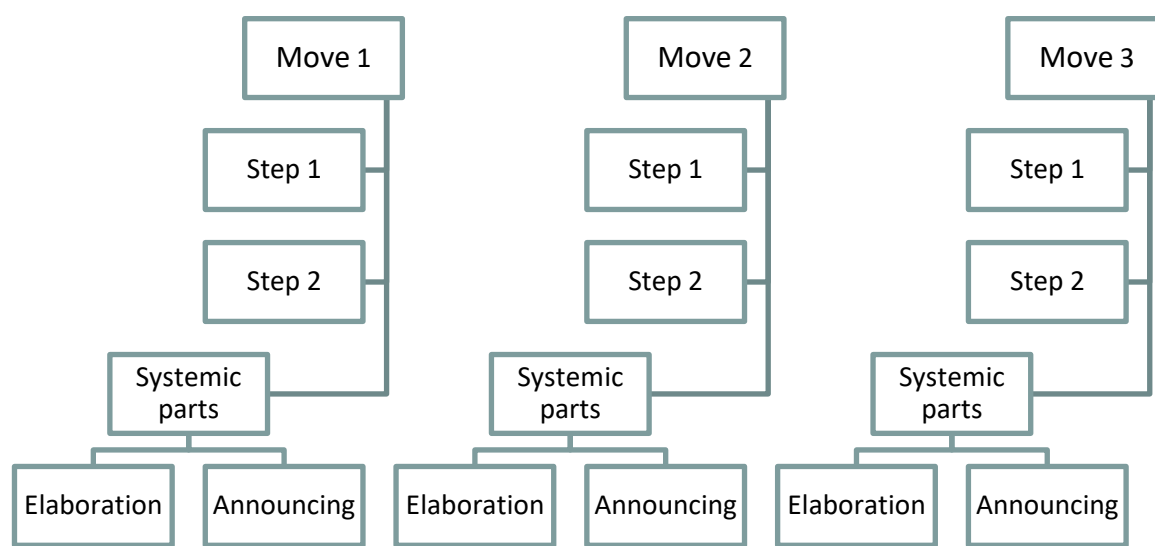
Figure 5.6. Segmental and systemic parts in a move analysis

As can be seen in the model, systemic parts are attached as nodes to moves. While these appear to be on par hierarchically with steps, they differ in that all systemic parts are amalgamated at the end of the coding process to represent the entire part system. For instance, in the model, all elaboration functions for moves 1, 2, and 3 would be combined, thereby representing the systemic part *elaborating*.

5.3.4.4 Macro-Structure

A final methodological issue for this move analysis was that philosophy RAs do not have a conventional macro-structure with conventional headings. Previous move analysis studies of entire RA structures have tended to analyze academic discourse that follows the conventional introduction, methods, results, discussion (IMRD) format (e.g., Cotos et al., 2015; Kanoksilapatham, 2015; Tessuto, 2015). Even for disciplines that do not strictly follow this format (such as mathematics and computer science), they still tend to have conventional sections consistent with the IMRD structure, such as "results" sections (e.g., Graves et al., 2013; Posteguillo, 1999). The situation is entirely different for philosophy. Only introduction and conclusion sections were conventionally used, and even here, there was a great deal of variation with present move

analysis models (discussed in more detail in upcoming chapters). As for the body of philosophy RAs, no conventional format is used, and there is no resemblance to the IMRD format, with no methods, results, or discussion sections.

This made applying the move analysis methodology a challenge since, historically, moves have been identified as functional units occurring within sections of IMRD formatted RAs. As shown in Figure 5.2 above, the solution to this issue was to employ the concept of a *macro-move*, which is roughly equivalent hierarchically to the section headings of the IMRD format. Nonetheless, macro-moves do not necessarily correspond to section headings, for single sections often employ multiple macro-moves. The generic structure of philosophy RAs will be discussed in more detail in the following chapters.

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CHAPTER 6 : THE MACRO STRUCTURE OF PHILOSOPHICAL DISCOURSE

This chapter will discuss the macro-structure and macro-moves of the philosophical research article corpus. The chapter will begin by describing the general macro-structure of the RAs as well as the macro-moves. The chapter then examines patterns of macro-move sequences and cycles. The chapter concludes by comparing the macro-structure of philosophical essays with RAs in other fields and disciplines.

6.1 The Macro Structure and Macro-Moves of Philosophical Discourse

This section presents the results of the macro-structure analysis of philosophical discourse, focusing on macro-moves. The section begins with a discussion of the general purpose and over-arching macro-structure of philosophical discourse. Next, the specific macro-moves identified in the corpus are explained.

6.1.1 The Macro-Structure of Philosophy RAs

Philosophy RAs aim at solving philosophical problems and critiquing solutions to philosophical problems. Taken together, this thesis-antithesis cycle aims at advancing philosophical dialogue by constructing and deconstructing philosophical positions. Thus, overall, philosophy RAs can be characterized as problem-solution texts, although several qualifications concerning this claim are in order. First, some authors focus entirely on building solutions, while others focus on assessing and critiquing the solutions of their colleagues, and some do both. Second, there is notable variation in how the functional components are organized sequentially in the text. As we shall see below, philosophers employ various organizational schemes to accomplish their argumentative ends. Finally, there are quite distinct types of philosophical problems that are dealt with. While it is most often the case that the problem is a puzzle concerning some philosophical topic, sometimes the problem being addressed is more of a textual or historical matter (a hermeneutical puzzle), as is often the case in works in the history of philosophy. Thus, the terms "problem" and "solution" in the context of philosophical writing should be understood in this broad and inclusive sense.

In making the generalization that philosophy RAs can be characterized as problem-solution texts, this might suggest a clear macro-move [77] structure, such as PROBLEM→SOLUTION→EVALUATION.[78] This, however, is not the case. While there are several consistent macro-moves used throughout the corpus, there are distinct patterns of arrangement that in part depend on the particular argumentative strategies employed by the authors. These organizational patterns will be explored in detail in the next section; however, for the remainder of this section, I will describe the five macro-moves identified in the corpus as well as the findings concerning footnotes.[79] An overview of these findings can be found in Table 6.1 and Figure 6.1 below.[80]

Table 6.1. Overview of macro-move findings

Macro-move	Sum of Texts with Macro-move[a]	Mean Word Count per Text[b]	SD for Word Count per Text	Mean Text Coverage[cd]
INTRODUCE PROBLEM AND PURPOSE	60	808	455	6.5%
DISCUSS PHILOSOPHICAL PROBLEM	52	1,606	1,382	12%
DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM	59	2,144	1,948	16.5%
ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT	60	5,322	2,308	40.5%
CONCLUDE ARGUMENT	56	426	465	3.5%
FOOTNOTE	60	2,575	1,587	19%

[a]The total number of texts in the corpus is 60.
[b] This is the average word count of the sum total words of that specific macro-move per text.
[c] The text coverage is calculated by taking the total number of characters in the coded function (in this case, the macro-moves) and dividing it by the total number of characters in the text. The text coverage includes footnotes.
[d] Rounded to the nearest .5%. The numbers add up to less than 100% because some characters of the text were not coded as these functions (e.g., headings, titles, and sub-titles).

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[77] As a reminder, macro-moves correspond to the highest-level of rhetorical functions that were analyzed in this dissertation. They roughly correspond to major section headings in the IMRD framework. If one were to describe the IMRD sections as macro-moves, their functions might be characterized as "describing the methodology of the study", "analyzing the results of the study", "discussing the results of the study", etc.

[78] Macro-move titles will be put in all-caps with small font for the sake of clarity.

[79] Footnotes are best understood as a type of systemic part rather than segmental parts (see Chapter 5, section 3.4.3). Because they occupy a notable amount of space in philosophical essays, they are presented here together with the macro-moves.

[80] A note about the order of presenting the macro-moves: While the order does in certain respects reflect how the macro-moves most often appear in the texts, this ordering is not obligatory (save the introduction and conclusion macro-moves).

As can be seen in Table 1, the six functions are either obligatory or conventional. Nonetheless, their average word counts and the amount of textual space they occupy notably differ from one another (see Figure 1). For instance, the macro-move ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT has on average more than double the word count than either the macro-move DISCUSS PHILOSOPHICAL PROBLEM or DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM. That said, as Table 1 shows, the standard deviation for the word counts of each function is high, suggesting that there is considerable variation between texts.
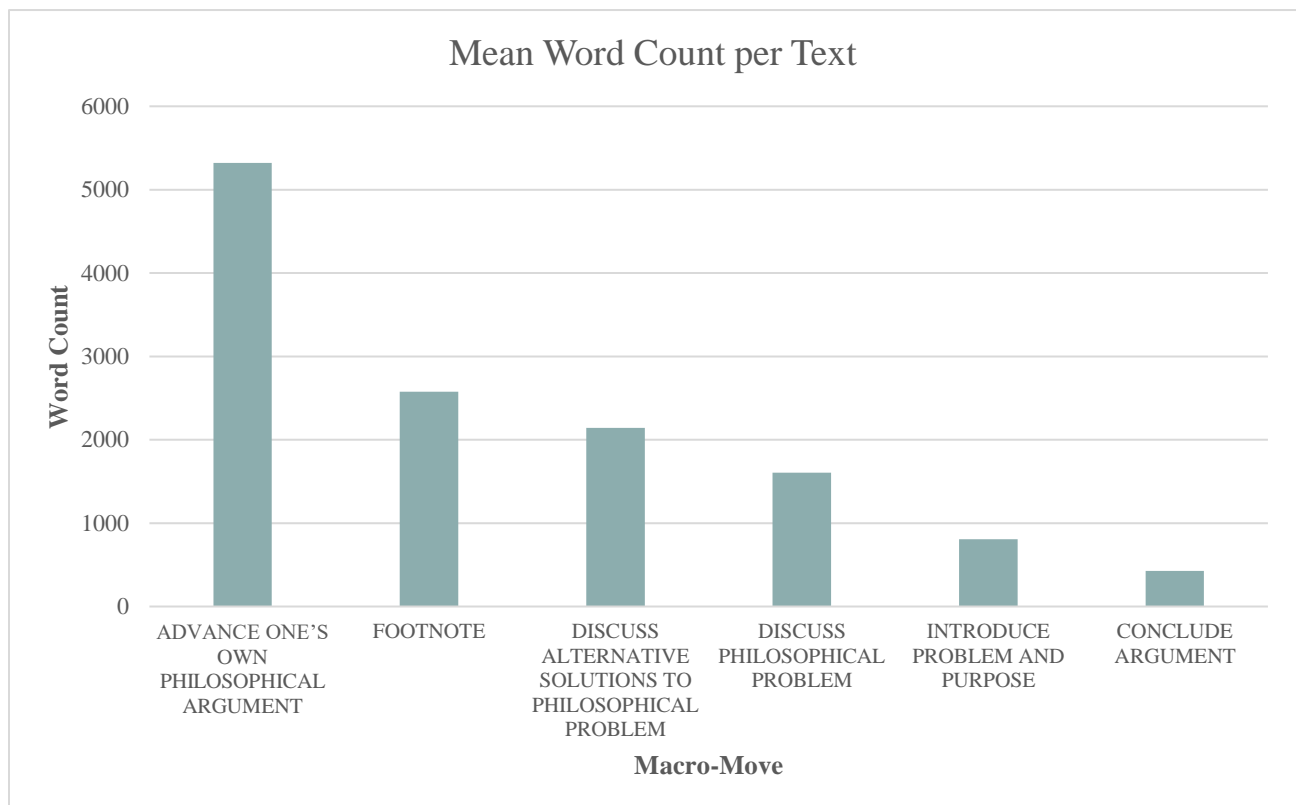

Figure 6.1. Mean word counts for macro-moves and footnotes

6.1.2 Characterization of Marco-Moves

In what follows, each of the functions in Table 1 is described in detail with examples.

1. INTRODUCE PROBLEM AND PURPOSE

The function of the marco-move INTRODUCE PROBLEM AND PURPOSE is one of orientation: The introduction makes clear to the reader the philosophical problem at hand as well as the author's purpose and argument that they will make. In this respect, the introduction of philosophical essays may not be as aptly captured by Swales' (1990; 2004) *create a research space* model as other disciplines, for while Swales' model emphasizes the importance of creating a niche for one's argument when situating it within the broader topic, in philosophy authors often seem to be most concerned with the task of letting their audiences know what the essay will be about. Consider, for example, the following short introduction by Hare (2016):

> Some theories of the rights and wrongs of individual action (henceforth just *moral theories*) have a curious feature. They say that sometimes it is wrong for you to act as you would if you were reasonable and moved solely by individual concern for each one of the people affected by your actions. In short: they generate conflicts between reasonable beneficence and morality.
> I want to do three things here. First, I want to present some examples of moral theories that generate conflicts between reasonable beneficence and morality (this is the business of sections 2 and 3). Second, I want to present an argument to the conclusion that all such theories are mistaken (section 4). Third, I want to suggest that this raises some very interesting further questions about the nature of beneficence (sections 5 and 6). (p. 451)

The example illustrates the orienting function of the introduction: The author makes the audience aware of the broad philosophical issue at hand and makes clear what argument they wish to advance. They do not, however, spend nearly any time synthetizing the broader literature nor carving out a well-motivated space for their project, save for the exigence created by the opening sentences of the first paragraph. The following chapter will analyze the introductions in more detail, paying attention to frequent moves and steps.

As can be seen in Table 1, this macro-move was present in every text (60/60), making it an obligatory function. In addition, while INTRODUCE PROBLEM AND PURPOSE covered on average only 6.5% of the text, there was considerable variation in the length of introductions. Hare's (2016) introduction above, for instance, was only 136 words and covered approximately 1.5% of the total

text.[81] At the other extreme, Smith's (2018) introduction to a topic in the philosophy of law ran 2,377 words and covered 19.5% of the text. Part of this variation is explainable by the fact that some authors, such as Smith (2018), spend a considerable amount of time setting up the philosophical problem at hand in the introduction. Other authors, such as Hare (2016) only briefly touch on the philosophical problem in the introduction and then provide a more elaborate description in upcoming sections. This raises the question of whether such lengthy introductions are in fact best understood as introductions at all or whether certain parts would better be understood as belonging to the macro-move DISCUSS THE PHILOSOPHICAL PROBLEM. For coding purposes, all moves occurring within the first section of the paper were considered part of INTRODUCE PROBLEM AND PURPOSE, for in almost all cases (regardless of length), this section ends with the move STATE GOALS OF THE PAPER, making it clear that the author sees this content as still introductory. That said, it would seem that philosophical discourse is flexible in regard to where authors can describe in detail the philosophical problem at hand. Although the average word count (808 words) might suggest a middle of the road path, many of the papers either had short introductions of less than 600 words ($n = 26$) or long introductions of more than 1,000 words; ($n = 16$).

2. DISCUSS THE PHILOSOPHICAL PROBLEM

The main function of this macro-move is to discuss the philosophical problem(s) or puzzle(s) that serves as the focal point of the essay. In other words, the author's goal is to frame the issue(s) at hand so that they can then discuss competing solutions to the problem and/or their own solution. In a certain respect, there is no analogous section or sub-section that corresponds to this macro-move in IMRD structured papers in the sciences and social sciences. Perhaps the closest similar function occurs in the introduction section, when authors *establish the territory* of their RA (Swales, 1990; 2004); however, for philosophical texts, this macro-move always occurred after the completion of INTRODUCE PROBLEM AND PURPOSE. Below is an example of part of this macro-move from Graham (2020), discussing the moral implications of cases that involve avoidable harm:

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[81]The shortest introduction in the corpus, Climenhaga (2018), was a mere 72 words: "Do intuitions function as evidence in philosophy? This question has generated a flurry of recent metaphilosophical work. In this paper I will argue that on one significant reading of the question, the answer to it is yes. To set the stage for that answer, though, we must first clarify what we mean by 'intuitions' and 'evidence', and whether the question concerns how philosophy is actually done or how it should be done" (p. 69).

Intuitively, there is a standing moral obligation to rescue others when doing so wouldn't cost too much. It would, for instance, be morally wrong to let a child drown if one could easily, and at no cost to oneself, reach down, grab him, and transport him safely to dry land. But satisfying the obligation to rescue isn't always so simple. Sometimes it is hard to satisfy because rescuing those in need isn't costless. And sometimes it is hard to satisfy because more than one person is in need and we can't rescue everyone. (p. 176).

This text segment occurs shortly after the introduction of the work, which, as will be discussed below, is frequently the first macro-move to occur after INTRODUCE PROBLEM AND PURPOSE.

While this macro-move most often involves discussing a central problem or a philosophical concept, in some cases it involves setting up the philosophical position of another author(s) that will serve as the problem at hand. It might seem that such cases could be grouped under the macro-move DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM; however, they were not classified as such since the rhetorical objective of such cases was distinct. In these cases, the main rhetorical aim in discussing the positions of others was to characterize the central philosophical puzzle in need of explanation or criticism in the RA, not to introduce alternative solutions to the philosophical puzzle.

Using the philosophical position of others to set up the philosophical problem is particularly common in RAs in the history of philosophy, where the philosophical problem is almost always one of textual interpretation of some author's argument. For example, in the passage below, Clark (2019) alludes to an argument made by the 17th century French philosophy René Descartes, which serves as the central philosophical issue of the essay:

It is widely recognised that Descartes took himself to know the premises of his arguments for the existence of God. However, no satisfactory account has been given for why Descartes saw this as justified…(p. 649).

Thus, for the macro-move DISCUSS THE PHILOSOPHICAL PROBLEM, "problem" should be understood in the broad sense of being the major issue dealt with in the essay, not in the more restricted topical sense of being a puzzle that belongs to some philosophical domain. In the example above, for instance, the philosophical puzzle concerns the existence of God, not Descartes argument for or against; however, the focus problem of the essay is not this philosophical puzzle, but rather what Descartes' attempted answer to the puzzle was.

This macro-move was only conventional and not obligatory, occurring in 52 out of 60 RAs in the corpus. As discussed above, part of the explanation for this may be that some authors spend a considerable amount of time discussing the philosophical problem as part of the macro-move INTRODUCE PROBLEM AND PURPOSE. For instance, Dorr's (2016) essay concerning counterfactual miracles does not contain the macro-move DISCUSS THE PHILOSOPHICAL PROBLEM; however, for this essay, the macro-move INTRODUCE PROBLEM AND PURPOSE is much longer than the average, coming in at 1,451 words, and a significant amount of textual space is spent setting up the philosophical problem. In fact, the heading for this first section of the paper is titled "the puzzle". Thus, it would seem that philosophy RAs are flexible in regard to where authors discuss the philosophical problem in detail, whether it be before introducing the purpose of their essay or after.

3. DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM

DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM involves summarizing, analyzing, explaining, and evaluating solutions to the problem that are not the author's own. Most often, these alternative solutions are critiqued and found to be faulty; however, occasionally authors will discuss alternative positions merely for the sake of comparison or in order to borrow from and/or extend an argument they find promising. Like with DISCUSS THE PHILOSOPHICAL PROBLEM, this macro-move does not have a clear analog in IMRD structured articles in the natural and social sciences. To some extent, this function is similar to the step *review items of previous research* (Swales, 1990), which authors do when *establishing the territory* in the introduction; however, in such cases, previous literature is often cited because it helps the author show there is a research gap or because the author will build upon and continue a research tradition, whereas this is seldom the case in philosophy. This macro-move is also similar to a step frequently found in the discussion section move *commenting on key results* (e.g., Basturkmen, 2012; Yang & Allison, 2003), namely, *comparing results with previous literature*. Nonetheless, this step is often used merely as a point of comparison, not of contention, that is, authors shows if their results were similar to others and, if not, what might account for the differences. While occasionally, philosophers discuss alternative solutions for both these aforementioned purposes, more often they do so as part of a dialectic in which one is attempting to offer a better solution than others. As a result, the positions of others are typically negatively evaluated in philosophical discourse. For example, in the passage below, Lackey (2020) discusses how the prevailing view of epistemic

duties (duties one has regarding what they should believe and presume to know) entails an alternative position to her own philosophical argument (a position Lackey will eventually find to be faulty):

> …the standard view of epistemic duties has at least two theses, both of which are at odds with the duty to object having an epistemic dimension. The first is that epistemic duties concern what we ought to believe, and thus their domain is strictly doxastic. For instance, Chase Wrenn says that "Epistemic duties are doxastic duties that are grounded in purely epistemic considerations, such as what evidence one has"…(p. 37).

This macro-move was present in 59 out of 60 articles in the corpus, suggesting that it is highly conventional. The only exception was D'Ambrosio (2019); however, two points are worth emphasizing about this RA. First, the article does, in fact, discuss alternative positions to the philosophical problem at hand; however, this discussion is framed as objections to the author's view, that is, the author advances his own solution and then considers what an opposing position would say in response. Second, this article has a somewhat unique argumentative approach that is beginning to gain traction in philosophy: it discusses an experimental design in which the author gathered data in the form of philosophical intuitions. This argumentative approach tends to focus more on advancing one's own solution to a philosophical problem, with less time being spent on alterative views. It is also worth noting that this macro-move, like the others, showed considerable variation in terms of how much textual space was dedicated to it. On one hand, 14 authors spent less than 600 words discussing alternative solutions; on the other, almost half of the authors, 27, used more than 2,000 words doing so. Thus, while it may be nearly obligatory to mention alternative solutions, it seems authors have a wide range of flexibility in how much space they dedicate to this function. Part of the explanation for this may be the salience of alternative views: If an alternative position to the philosophical problem is widely held or is highly regarded, it may be that authors feel a greater need to discuss that solution in their work, for their audience will likely wonder why the author's view is needed or is preferable to the prevailing view.

4. ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT

The macro-move ADVANCE ONE'S OWN PHILOSPHICAL ARGUMENT functions as a way for the author to put forth their own position in regard to a philosophical problem. Most often this involves providing a solution to a problem by offering a philosophical analysis of a concept or constructing a theory; however, in the history of philosophy, this often takes the form of providing

an interpretation of an author's position. It is also not uncommon for authors to have a position which is wholly critical, that is, their argument does not offer a solution to the philosophical problem at hand, but rather raises issues about the solution of another. In comparison to IMRD structured articles, this macro-move is most analogous to the *results* and *discussion* sections; however, at the move-level, there are notable differences, particularly the emphasis placed on evaluating one's argument and responding to potential objections (discussed in the next chapter).

The excerpt below by Nebel (2019) provides a fairly straightforward example of an author offering their own solution to a philosophical problem, in this case, to a linguistic puzzle about why some adjective complement clauses cannot be substituted with paraphrased propositional descriptions of a certain form:

> The reason is not, I think, that the clausal complements of adjectives do not refer to propositions. There is a simpler answer. The simpler answer appeals to the fact that proposition descriptions can complement adjectives only when marked by a preposition—but not just any preposition will do…(p. 66).

This macro-move was obligatory, occurring in all 60 RAs in the corpus, and it was the longest macro-move, both in terms of mean text coverage (40.5%) as well as mean word count (5,322). This suggests that considerable emphasis is placed on one's own argument; however, as will be discussed in greater detail in the following chapter, time is spent not just constructing and explaining one's argument, but also defending one's argument against potential objections and issues. In addition, as with the other macro-moves, the amount of time spent on this move varied considerably across RAs, with several spending less than 25% of the textual space on this move ($n = 10$) while others spent over 50% ($n = 15$).

5. CONCLUDE ARGUMENT

The function of the macro-move CONCLUDE ARGUMENT is multifaceted. Most often it involves summarizing one's argument, but it can also involve situating one's argument within the broader philosophical landscape and discussing possible implications of one's view. Overall, this macro-move is quite similar to conclusions that appear in the natural and social sciences; however, the frequency with which philosophers simply summarize their argument is somewhat distinctive. The example below shows a conclusion that is simply a summary of the argument:

> In this article, we have provided evidence that across quite different cultures and languages people exhibit Gettier intuitions, and thus that the concepts they express by the words that translate "to know" require more than justification, truth, and

belief. This may reflect one of the components of a species-typical core folk epistemology (Machery et al., 2017, p. 656).

In contrast, in this second example, Hirji (2019) focuses on drawing broader philosophical implications about the argument.

> If what I have argued here is right, Aristotle's view, though often misunderstood, is coherent, sophisticated, and importantly distinct from what we find in the neo-Aristotelian tradition. Is it compelling? We might worry that Aristotle's account of *eudaimonia* depends on an implausible natural teleology. We might also worry that it is overly narrow, failing to accommodate the diverse ways in which humans can live flourishing lives. Although I am sympathetic to these concerns, I think there is something in the vicinity of the view Aristotle defends that we might find plausible (p. 692).

Like the macro-move INTRODUCE PROBLEM AND PURPOSE, this macro-move has a fixed location, always occurring at the end of the RA; however, unlike INTRODUCE PROBLEM AND PURPOSE, the conclusion did not always have a clearly marked section. For instance, Bukoski (2018), Schectman (2016), and Smith (2018) all end their RAs with rhetorical functions that were coded as CONCLUDE ARGUMENT, even though no such heading was used to indicate to the audience that a conclusion was forthcoming. For example, the final section of Bukoski's (2018) work critically evaluates an argument made by another philosopher. Having completed the critique, Bukoski then closes the essay by considering the broader implications of this critique without including any conclusion header.

> The upshot is that Korsgaard's Argument suffers from a purely internal problem— a logical fallacy—that even her most sympathetic readers should acknowledge. It begs the question in favor of the value of humanity and its putative role in justifying other practical identities. It does so even if we grant Korsgaard various controversial premises, including her account of value in terms of valuing that survives reflective scrutiny (that is, the Metaethical Premise), her claim that valuing one's own humanity commits one to valuing the humanity of others (that is, the Generalization Premise), and her conception of rational agency, including the iterative nature of the reflective structure of human consciousness and the need for justification. Kantians who wish to continue the project of showing that rational reflection commits everyone to valuing humanity as the source of all value must show how to repair Korsgaard's arguments or else look elsewhere for support (p. 222).

CONCLUDE ARGUMENT was found to be highly conventional, although not obligatory, as it occurred in 56 out of the 60 RAs. It was also the shortest macro-move, covering only 3.5% of the

textual space and having a mean word count of just 426 words. In fact, a majority of the articles in this corpus had conclusions of 400 words or less ($n = 37$). In contrast, a handful were more than 1,000 words ($n = 7$). While the shorter conclusions tended to mostly summarize the argument made in the article, the longer conclusions tended to make additional rhetorical moves, such as drawing implications and evaluating the argument.

6. FOOTNOTE

The systemic move FOOTNOTE[82] serves two primary functions in philosophy RAs: (1) to elaborate on content in the body of the work when the elaboration would be somewhat of a digression from the main point being made and (2) to refer to other works. On one hand, because footnotes are always made in the body of the work, they could be understood as sub-functions of the broader macro-move in which they occur. However, on the other hand, footnotes are dispersed throughout the entire work, and thus their overarching functions (elaboration and reference) are not necessarily tethered to the macro-moves in which they occur. Furthermore, footnotes occupy a considerable amount of textual space (*mean* = 19%) and run, on average, 2,575 words, suggesting this is an important function to be understood in its own right.

The reason footnotes occupy a large amount of textual space is that elaborations can run one or even several paragraphs. In the example below, for instance, Benton (2016) makes note of a point they deem to be often missed in the literature, one which they take considerable time to spell out:

> It is often overlooked (though see Williamson 2000, 243 n. 3) that fulfilling the Quality submaxims as they are written does not even require belief: for if a speaker had some weak evidence in support of some proposition p, but did not yet believe on its basis (perhaps she suspends judgment), and nevertheless thought that this evidence were 'adequate' for asserting, then she could assert p and fulfil Quality, including its sub-maxims: for she would be trying to make her contribution one that is true, she would not believe p false, and would have evidence for p. But on the one hand, arguing for this literal reading would require the idea that the norm of assertion is weaker from the standard of evidence on which one is obligated to believe (something in which I have no interest in doing); and on the other hand, Grice elsewhere suggests that fulfilling Quality involves believing (or at least taking oneself to believe): see 1989, 41–42 (cited below in fn. 16). (p. 699).

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[82]Although I refer to this function as a "footnote", it also includes endnotes. Whether a footnote or endnote is used depends on the journal.

Footnotes were found to be obligatory, occurring in every RA ($n = 60$); however, here too there was considerable variation, both in terms of the number of footnotes used as well as the number of words. On average, each article used 39 footnotes; however, at one extreme, 2 of the RAs used less than 7 footnotes; at the other extreme, 2 RAs used more than 100 footnotes. With respect to word count, 5 RAs used less than 600 words in their footnotes, while 6 RAs used more than 5,000 words. One explanation for this variation is that authors use different citation formats: While some include citations in the body of the work, others use footnotes for citations. This, however, has limited explanatory power, for citations do not require a considerable number of words. Another possible explanation concerns word counts for the body of the text: Footnotes allow authors to keep the main text more concise. For example, if an author considers there to be an objection to a point they make, they could include a footnote addressing the objection. It should be noted, however, that it is not an inconsequential rhetorical choice to put an objection in a footnote, for doing so suggests that the author either found the objection to be somewhat tangential to the main argument or did not find the objection particularly forceful, for objections *are* frequently addressed in the body of the text as well. Third, the variation in footnotes may also be explained by the possibility that authors have differing strategies for reaching audiences. Heavily footnoted articles often contain large amounts of background information on topics and references to other works that can help readers locate information pertinent to the argument being made. Using footnotes in this way would seem to help audiences less familiar with the main topic of the essay. On the other hand, RAs with a limited number of footnotes seem less concerned with helping less technically grounded audiences. Finally, this variation may be accounted for in terms of authors having different strategies for buttressing their arguments: Footnotes often make the grounding for points more explicit.

6.2 Macro-Structures: Sequences and Cycles

This section will discuss macro-move structures and macro-move cycles. As was noted above, philosophy RAs can be characterized as problem-solution texts, and while there is no single conventional organizational scheme used by philosophers, there are several conventional schemes that are frequently employed as well as common cycles of macro-moves. This section will characterize these schemes.

6.2.1 Macro-Move Structures

All philosophy RAs begin with the macro-move INTRODUCE PROBLEM AND PURPOSE and most ($n = 56$) finish with CONCLUDE ARGUMENT. In between, there is variation in how the macro-moves are structured. This section will focus specifically on the ordering of macro-moves in terms of when they first appear in the body of the work. This may somewhat overly simplify the picture of the structure of philosophical RAs, but it is useful since it will help show how authors initially use each function in their work. In the next section, macro-move sequences and cycles will be considered, not just the first appearance of each, which will considerably complicate how the RAs are structured.

After completing the macro-move INTRODUCE PROBLEM AND PURPOSE, a majority of the philosophers began the body of their essay with the macro-move DISCUSS THE PHILOSOPHICAL PROBLEM ($n = 49$, or 82%). Nevertheless, in 10% of cases ($n = 6$), authors began with DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSPHICAL PROBLEM, and in 8% of cases ($n = 5$) authors began with ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT. Beginning with a detailed description of the problem at hand is not surprising, given that this problem is the exigence for the argument the author will make. What is surprising is that some authors begin by discussing solutions to problems (whether their own or others). As was noted above, this can be explained by the fact that the philosophical problem is often discussed in the introduction of the work. Thus, in these 11 cases, the authors must have deemed their initial characterization of the problem to be sufficient for beginning a discussion of solutions. It should be noted, however, that while the altogether lack of the macro-move DISCUSS THE PHILOSOPHICAL PROBLEM sometimes co-occurs with more extensive and elaborate introductions (discussed above), this is not always the case. For example, Rowland (2017) begins the body of his essay with the macro-move ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT; however, the introduction of the work only spends one paragraph characterizing the philosophical problem:

> Fundamental moral disagreements are moral disagreements that would survive in ideal conditions. That is, conditions in which the parties to the disagreement are (at least) informed of all the non-moral facts and are fully rational. Many have argued that if there are fundamental moral disagreements, then moral realism is false. However, it has not been made clear how fundamental moral disagreement could have any metaphysical consequences at all or pose a problem for moral realism. After all, moral realists hold that moral truths are independent of us. And it may well be that there would be disagreement in ideal conditions about other truths that are independent of us. But this would not cast doubt on there being such truths. If

there were disagreements in ideal conditions about whether dualism holds or whether we have free will, this might show that we cannot know whether we have free will or whether dualism holds. But such disagreement would not show that there is no truth of the matter about whether we have free will or show that we should construe truths about free will in an anti-realist fashion (p. 802).

A possible explanation for such a limited discussion of the problem is that it is deemed to be one that is well-known in the philosophical literature. In contrast, it may be the case that problems that are more niche or specialized need a greater amount of space to be fleshed out. Thus, both the familiarity of the audience with the problem at hand as well as how much time is spent discussing the problem in the macro-move INTRODUCE PROBLEM AND PURPOSE may account for whether authors begin the body of their essay with a more elaborate discussion of the problem.

For authors who begin with DISCUSS THE PHILOSPHICAL PROBLEM, most then proceeded to DISCUSS ALTNERATIVE SOLUTIONS TO PHILOSOHPICAL PROBLEM ($n = 28$) while the remaining ($n = 21$) began to ADVANCE ONE'S OWN PHILOSPHICAL ARGUMENT. Because advancing one's own argument was found to be obligatory (every text utilized this macro-move), this means that in almost half of the corpus ($n = 28$ or 47%), the ordering of these three moves in terms of when each first appears is DISCUSS THE PROBLEM → DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT.[83] On the other hand, in 20 RAs (33%), the ordering of the three moves in terms of the first appearance of each is DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVE SOLUTIONS.[84] Thus, while it is conventional to first discuss the philosophical problem in the body of the essay, it would seem that there is more rhetorical flexibility in regard to whether one then advances their own argument before discussing those of others or whether they discuss those of others before their own. The latter pattern fits with Geisler's (1994) path, faulty-path model, for in almost all cases in which alternative solutions are brough up, authors critique these solutions, which helps to pave the way for their own position. On the other hand, the former pattern might be termed "dominant/inferior paths", for the author first presents their own argument before offering alternatives. Two factors stand out as possible explanations for the preference of one structure over the other. First, the perceived level of importance of alternative solutions may drive whether one decides it needs to be cleared from the playing field before one can offer their own solution. For example, if there is a prevailing viewpoint in the literature, one

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[83]The labels have been abridged.

[84]In one RA, the author did not make the macro-move DISCUSS ALTNERATIVE SOLUTIONS; hence, there are only 20 articles and not 21.

may need to first offer some criticism of this position to motivate the need for a different perspective. Second, whether the alternative solution is actually attributed to a specific author may make a difference. In some cases (e.g., Schechtman, 2016), an alternative solution is proposed without it being the case that any specific philosopher argued for such a position. In these cases, there may be a stronger inclination to present the alternative after one makes one's own argument. On one hand, comparing one's own solution with hypothetical others is a means by which one can positively evaluate their own. For example, the author can show that other accounts face more difficulties than their own. On the other hand, if one were to place such an un-attributed alternative solution before one's own argument, this might create a perception that the author is being somewhat disingenuous and perhaps fighting with strawmen, for by setting up a position that no specific author holds and then knocking it down, one might question whether the author picked an easy opponent to make their own argument look good. At any rate, further research should investigate the viability of these potential factors.

With respect to the cases that do not begin with DISCUSS THE PROBLEM, they are almost equally split between the following sequences in terms of the order of first appearance: DISCUSS ALTNERATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT ($n = 6$) and ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTNERATIVE SOLUTIONS ($n = 5$). The same factors discussed in the paragraph above likewise apply here. It should also be noted that in 8 of these 11 cases, the macro-move DISCUSS THE PROBLEM was not made at all. In the other 3 cases, DISCUSS THE PROBLEM occurs in the middle of the text, after both the macro-moves DISCUSS ALTNERATIVE SOLUTIONS and ADVANCE ONE'S OWN ARGUMENT has been made. Since this pattern is particularly anomalous, it is worth looking at an example more closely.

Schechtman's (2016) work involves an examination and interpretation of different concepts of infinity that were used in early modern philosophy. The author describes this problem in the introduction of the work, and she then immediately proceeds in the body of the essay to advance her own argument by providing an interpretation about John Locke's understanding of this concept. In the next major move, she discusses an alternative interpretation of Locke, and she then proceeds to interpret how philosopher Rene Descartes distinctly understood this concept. Finally, before offering an interpretation of how a third philosopher understood this concept, Schechtman makes note of a philosophical problem that arises from previous points in the discussion. The description of this puzzle serves as historical context in explaining the third

philosopher's concept of infinity. Thus, in this particular case, the macro-move DISCUSS THE PROBLEM occurred after the others due largely to the fact that the solutions to previous philosophical problems led to new problems.

In conclusion, there is no single conventional macro-move structure used in philosophy. Furthermore, while in a majority of cases, the first use of each macro-move tends to happen in one of two ways—either DISCUSS THE PROBLEM → DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT or DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVE SOLUTIONS—this may make it appear that philosophy RAs are more conventionally structured than they are. When move-cycles are taken into account, much more variability is evident. Examining this variation is the task of the next section.

6.2.2 Macro-Move Sequences and Cycles

A macro-move sequence is simply the textual ordering of macro-moves, and a macro-move cycle is a sequence of repeated macro-moves (Samraj, 2014). Unlike the previous section, which focused on the first appearance of each distinct kind of macro-move in the text, this section will provide a more fine-grained analysis of how authors shift between macro-moves throughout the body of the essay.

To begin, it is helpful to note the sum and average number of times that each macro-move occurred in the body of the essay (the introduction and conclusions macro-moves are not included since, if they occur at all, they only occur once). Table 6.2 shows the sum and average of each macro-move.

Table 6.2. Macro-moves sum and average

Macro-move	Sum Total	Average Per Text
DISCUSS PHILOSOPHICAL PROBLEM	178	2.97
DISCUSS ALTERNATIVE SOLUTIONS TO PHILOSOPHICAL PROBLEM	157	2.62
ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT	237	3.95
Totals	572	9.54

As can be seen, the most frequently used macro-move was ADVANCE ONE'S OWN PHILOSOPHICAL ARGUMENT, and, on average, each text used between 9 and 10 macro-moves. There was, however, considerable variation across texts, as the standard deviation was approximately 5.7. Figure 6.2 shows this variation.
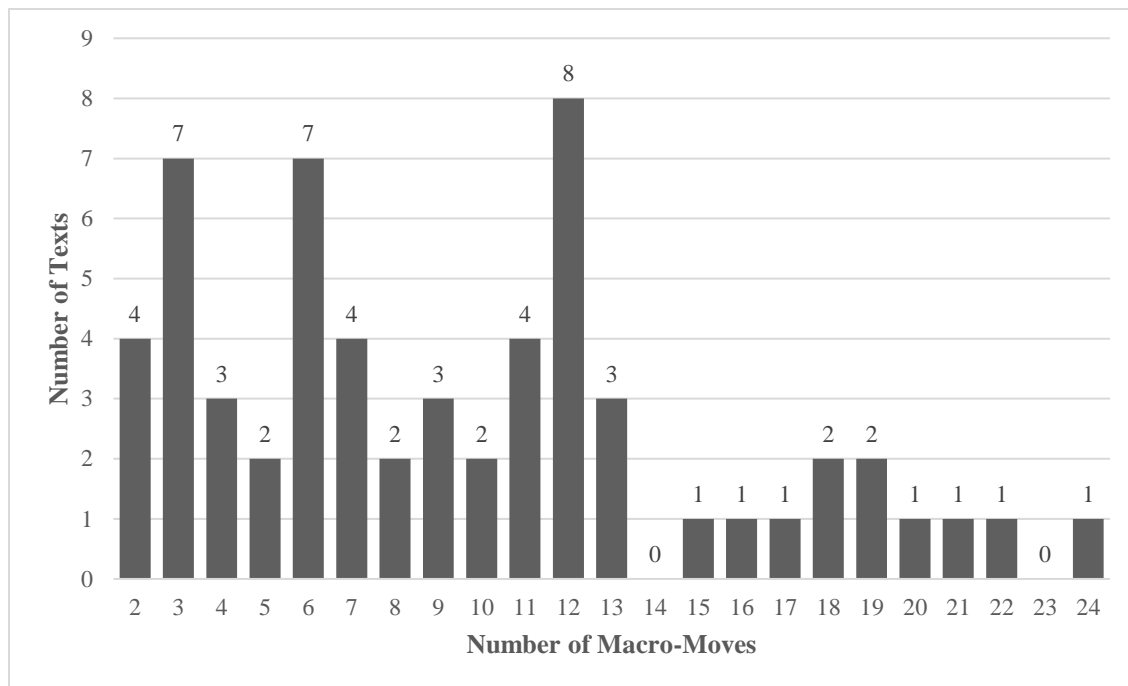
Figure 6.2. Variation in use of macro-moves

The bars in the figure show the number of texts that make use of a set number of macro-moves. In the first bar, for example, 4 texts make use of only 2 macro-moves in total. Two points stand out in the figure. First, over 80% of the texts make use of more than 3 macro-moves, implying that a majority recycle macro-moves in the body of the text. Second, it is also the case that over 80% of the texts make use of less than or equal to 13 macro-moves. This implies that although macro-moves may be reused and that there may be macro-move cycles, these tend to be rather coarse grained in the text in that each function tends to occupy a large amount of textual space.

In terms of patterns of move sequences, Table 6.3 provides an overview of 2-move sequences.

Table 6.3. Sequences of 2 macro-moves

2-Move Sequences	Individual Texts[a]	Sum[b]	Average[c]
DISCUSS THE PROBLEM → DISCUSS ALTERNATIVE SOLUTIONS	40	70	1.2
DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT	38	108	1.8
DISCUSS ALTERNATIVE SOLUTIONS → DISCUSS THE PROBLEM	17	26	0.4
DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT	54	125	2.1
ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM	35	102	1.7
ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVE SOLUTIONS	37	81	1.4
Totals		512	8.5

[a] The total number of distinct texts that had at least one instance of the move sequence
[b] The total of all move sequences in the entire corpus
[c] The average of this move sequence per text

The table shows the most frequent 2-move sequence was DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT, which occurred at least once in 90% of the texts and on average was used over twice per text. This sequence underscores the importance of the dialectical nature of philosophical argumentation, which involves shifting between the arguments of others and one's own philosophical position. The most infrequent sequence was DISCUSS ALTERNATIVE SOLUTIONS → DISCUSS THE PROBLEM, occurring in less than 30% of texts. This is perhaps not surprising, for on one hand, the macro-moves DISCUSS THE PROBLEM and DISCUSS ALTERNATIVE SOLUTIONS were less common than ADVANCE ONE'S OWN ARGUMENT. Thus, it is to be expected that sequences involving these moves will be less frequent than those connected with ADVANCE ONE'S OWN ARGUMENT. In addition, as was noted above, DISCUSS THE PROBLEM frequently occurs in the beginning of the text and appears less frequently at later stages. Finally, when this macro-move does occur after another macro-move, it is much more common for it to follow ADVANCE ONE'S OWN ARGUMENT, as this sequence occurred in over 50% of texts and had an average of 1.7 sequences per text. Thus, when DISCUSS THE PROBLEM does occur in the body of the text after another macro-move, this is usually the result of the author addressing one philosophical puzzle only to then describe a new puzzle that arises from their attempted answer.

For instance, in De Rosa's (2018) essay concerning Descartes' theory of sensory ideas, the author spends the first part of the essay interpreting why Descartes believed sensory ideas are innate. Having offered what is deemed a satisfactory answer, the author then turns to another issue that must be addressed:

> The question remains why sensory ideas represent particular bodies. This question is pressing since—as we saw in Section 1 where I reviewed the passages in support of Claim B—Descartes insists that sensory ideas are passively received by the mind and represent, or refer to, what causes them. And so it seems important to understand the sense in which bodies are causes of sensory ideas and their contents (De Rosa, 2018, p. 716).

With respect to 3-move sequences, the top 6 most frequent and most widely dispersed (in terms of the percentage of texts that include at least one instance of the sequence) are shown below in Table 6.4.

Table 6.4. 3-move sequences

3-Move Sequences	Sum	Individual Texts	Percentage of texts
DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVES	54	26	43%
DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM	67	26	43%
DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM	35	28	47%
ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT	75	29	48%
ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVES → ADVANCE ONE'S OWN ARGUMENT	70	32	53%
DISCUSS THE PROBLEM → DISCUSS ALTERNATIVES → ADVANCE ONE'S OWN ARGUMENT	49	35	58%

As can be seen, two 3-move sequences are conventional (occurring in more than 50% of texts). One sequence involves going from one's own argument to considering alterative solutions to once again returning to one's own argument. It is interesting to note that the similar 3-move

sequence of shifting between alternative solutions and one's own argument was also quite common (this will be further discussed below). The other conventional 3-move sequence involves first discussing the philosophical problem, then alternative solutions, and finally one's own. While this sequence occurred at least once in the greatest percentage of texts, it was not the most frequent 3-move sequence in the corpus; rather, the most frequent involved advancing one's own argument, then discussing the problem, then returning to one's own argument. Part of this pattern was explored above in De Rosa's (2018) work on Descartes: After solving one part of the problem, the author then shifts back to the problem to describe either some other aspect or a new problem that has arisen.

Table 6.5 shows the four most common and widely dispersed 4-move sequences.

Table 6.5. 4-move sequences

4-Move Sequences	Sum	Individual Texts	Percentage of texts
ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM	49	17	28%
ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVES → ADVANCE ONE'S OWN ARGUMENT → DISCUSS ALTERNATIVES	35	18	30%
DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT	50	19	32%
DISCUSS ALTERNATIVE SOLUTIONS → ADVANCE ONE'S OWN ARGUMENT → DISCUSS THE PROBLEM → ADVANCE ONE'S OWN ARGUMENT	47	22	37%

As can be seen, the 4 sequences above represent 2 macro-move cycles: (a) cycling between one's own solution and alternative solutions, and (b) cycling between one's own solution and the philosophical problem. This further shows the emphasis and importance placed on one's own position in the philosophical dialogue, for this function is more commonly juxtaposed to the others than the others are to one another. It should also be noted that while the use of these cycles on their own was used in less than half of the corpus, two-thirds of the corpus used either one or the other

(or both) cycles ($n = 40$). This suggests that the use of a macro-move cycle in general is conventional in philosophical writing.

Let me summarize the most important findings of this section. First, the 3-move sequence DISCUSS THE PROBLEM → DISCUSS ALTERNATIVES → ADVANCE ONE'S OWN ARGUMENT was found to be the most common 3-move sequence in terms of its dispersion in the corpus, occurring in 58% of the texts. This suggests that the most conventional structuring of functions in philosophical writing involves discussing the problem at hand, then considering how others have attempted to solve the problem, and then finally advancing one's own solution. Second, 2 distinct macro-move cycles were commonly employed, and two-thirds of the corpus used either one cycle or the other. This shows that authors frequently move between (a) their own argument and (b) philosophical problem and alternative solutions.

6.3. Comparisons to Extant Research and Other Fields

This section will compare the results of the above sections with the existing literature conducted on philosophical writing and, more broadly, the entire RA structure of texts in other fields and disciplines.

6.3.1 Comparison to Extant Research on Philosophical Writing

As was discussed in the literature review in Chapter 4, most research on philosophical writing has been conducted on the introductions and abstracts as well as common linguistic structures. One notable work that did discuss the RA structure of philosophical writing more broadly was Geisler (1994), who argued that philosophers make use of a path/faulty path schema. To recap, this organizational structure involves the presentation and refutation of faulty positions, arranged in order of their faultiness. This is followed by the author's own solution, which is deemed to be the least faulty of all positions. This organizational structure is fitting with certain findings in this dissertation. Most notably, it was found that the most common order in which the macro-moves are first used as well as the most common three-move sequence involved introducing the problem, then discussing alternative solutions, and finally advancing one's own argument. While Geisler did not emphasize the presentation of the problem in her schema, the other macro-moves in this sequence are consistent with her model. Indeed, in presenting the solutions of others,

authors almost always offer a critical evaluation (discussed in the next chapter). That said, Geisler's model would seem to suggest that most authors do not discuss their own solution until the end of their work, once other solutions have been surveyed and dismissed; however, as was noted above, two-thirds of the corpus used at least one macro-move cycle. This shows that philosophical writing is not always structured along the lines of first presenting the faulty solutions of others and then moving on to one's preferred solution; rather, authors often shift between presenting their solution and those of others.

6.3.2 Comparison with Other Fields

Philosophy RAs do not resemble the standard IMRD format of many RAs in the social and natural sciences explored by move analysis researchers (e.g., Cotos et al., 2015; Kanoksilapatham, 2005, 2015; Zhang et al., 2011). With few exceptions, the corpus did not contain any macro-moves that resemble the methods and results sections. In a few cases, philosophy articles did employ a methodology known as "experimental philosophy", which involves collecting empirical data in the form of intuitions from participants. Nonetheless, even in these cases, the articles did not utilize an IMRD format. While there were sometimes sub-sections in these RAs labeled "methods" and "results", these sections showed notable differences from more conventionally structured IMRD articles. For instance, in some cases, authors present several different experiments, with a "methods" and "results" sub-section for each experiment rather than including the entire methodology in one section (D'Ambrosio, 2019; Khoo & Knobe, 2018). In other cases, parts of the methodology are actually described in footnotes, e.g., the data analysis procedures (Faraci & Shoemaker, 2019; Rose & Schaffer, 2017).

On the other hand, the discussion section of IMRD articles is similar in certain respects to the macro-moves DISCUSS ALTERNATIVE SOLUTIONS and ADVANCE ONE'S OWN ARGUMENT; however, the typical moves made in these sections are notably different. For example, philosophers spend a considerable amount of time evaluating both the arguments of others as well as their own arguments. In fact, in some RAs, entire sections are dedicating to hypothesizing potential objections and defending one's argument against them. Such elaborate appraisals of one's own argument are seldom used in IMRD articles. This may be because for IMRD articles, much of the force of the argument is derived from the soundness of the methodology being employed. The methods section can thus serve as a justification for one's argument. In this respect, when authors

note limitations to their work in the discussion section or conclusion, this seems to play a similar role to the objection and response moves made by philosophers; however, again, these limitations are typically rather briefly discussed, whereas in philosophy, objections and responses can be quite elaborate (this will be discussed further in the next chapter).

Finally, while the philosophy RA is similar to IMRD structured RAs in that both usually contain an introduction and conclusion, here too philosophy RAs exhibit notable differences in the typical moves and steps that they make. Most outstanding, one seldom finds elaborate literature reviews in the introduction that are used to provide background and motivate the project. Philosophers also do not typically motivate their work by noting gaps in previous studies. This focus on moves and steps will be discussed in greater detail in the next chapter.

Outside of the natural and social sciences, philosophy RAs are distinct compared to other related disciplines. For instance, Graves et al. (2013) examined the structure of RAs in mathematics, a field often closely related to philosophy, especially those working in logic. Philosophy RAs are similar in that they do not contain explicit method and discussion sections. In addition, Graves et al. (2013) point out that mathematics RAs frequently use content headings rather than generic headings, which is also frequently the case in philosophy. Nonetheless, there are notable differences. Graves et al. (2013) note that the main section of mathematics RAs—the results section—focuses on providing a proof of some mathematical problem. This is followed by a conclusion section that evaluates the results, discusses the significance, and/or suggests further research. While the results section does bear similarities to the macro-move ADVANCE ONE'S OWN ARGUMENT, the text structure as a whole is distinct, for philosophers typically cycle between a discussion of their own argument and those of others and the problem at hand. In addition, in discussing their own argument, philosophers do not typically wait until the conclusion to evaluate their argument; rather the evaluation is an integral part of discussing their argument, and the evaluation is usually embedded within sections where the argument is discussed. Similar remarks can be made about Holmes' (1997) analysis of history RAs: The RAs in this field were not found to typically contain methods sections. Furthermore, Holmes notes that historians typically have a narrative or main argument section, which occupies a central role in the essay (similar to ADVANCE ONE'S OWN ARGUMENT); however, he also notes that the authors typically do not employ move cycles, which was not found to be the case in philosophy. Nonetheless, given the small sample

size ($n = 10$) and the outdatedness of Holmes' work, future research should re-examine the similarities between writing in philosophy and history.

Thus, overall philosophy RAs are notably distinct from the conventional IMRD format typically found in the social and natural sciences. Furthermore, while they bear similarities to RA structures in other related fields such as mathematics and history, there are notable differences as well. Nonetheless, little research has examined the macro structure of fields outside of the natural and social sciences. Future research would need to explore disciplines such as literature, rhetoric and composition, religion, anthropology, etc. to more definitively answer the question of whether the macro-structures of RAs in these fields bare similarity to one another.

6.4. Conclusion

This chapter examined the macro-structure of philosophical RAs. It was found that philosophers make use of 5 main macro-moves. Notably, in the body of their works, philosophers DISCUSS THE PROBLEM, DISCUSS ALTENRETIVE SOLUTIONS, and ADVANCE THEIR OWN ARGUMENT. Furthermore, this chapter found that philosophers make use of macro-move sequences and macro-move cycles. One of the most common sequences involves moving from the problem to alterative solutions to one's own solution. The most common cycles involve shifting between (a) one's own argument and the arguments of others and (b) one's own argument and the problem at hand. These characteristics show that, in many ways, the macro rhetorical functions of philosophical writing are distinct from those found in the social and natural sciences, which typically employ the IMRD format. However, this analysis has been coarse-grained, grouping large chunks of text under single rhetorical functions. In the upcoming chapters, a more nuanced picture of philosophical writing will be painted by analyzing the rhetorical functions at the level of moves and steps.

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CHAPTER 7 : A MOVE AND STEP ANALYSIS OF PHILOSOPHICAL WRITING

This chapter analyzes the moves and steps used in the macro-moves identified in the previous chapter. The chapter begins with an analysis of the macro-move INTRODUCE PROBLEM AND PURPOSE. Next, the moves and steps of the macro-moves of the body of the text are analyzed. Finally, the chapter examines the macro-move CONCLUDE ARGUMENT.

7.1 Moves and Steps in the Introduction

7.1.1 Overview of Results

As was noted in Chapter 6, the macro-move INTRODUCE PROBLEM AND PURPOSE aims to orient the reader towards the philosophical problem at hand, and it lays out the author's purpose and argument. This dissertation found that philosophy RAs make use of 3 core moves in the introduction as well as 1 systemic function (ELABORATE). Table 7.1 presents an overview of these functions.

Table 7.1. Overview of move analysis findings in the introduction

Move Name	Functional Description	Number of Texts[a]	Percentage of Texts[b]
ESTABLISH THE TERRITORY	Describe the central philosophical topic and problem.	55	92%
ESTABLISH NICHE	Motivate one's central purpose.	51	85%
STATE PLAN	Describe one's purpose and argument.	60	100%
ELABORATE	Provide additional details.	14	23%

[a]The number of texts that make use of at least 1 instance of the move.
[b]Out of a total of 60 texts in the corpus.

The 3 core moves identified in this dissertation roughly correspond to those in Swales' (1990; 2004) *Create a Research Space* (CARS) model, with the exception that move 3 has been renamed to "state plan" for reasons that will be discussed shortly. Table 1 shows only one move was obligatory (STATE PLAN). The other core moves were conventional, and the systemic move

ELABORATE was only optional. Figures 7.1 and 7.2 below provide additional details about the average textual coverage[85] of the moves as well as the average word counts.
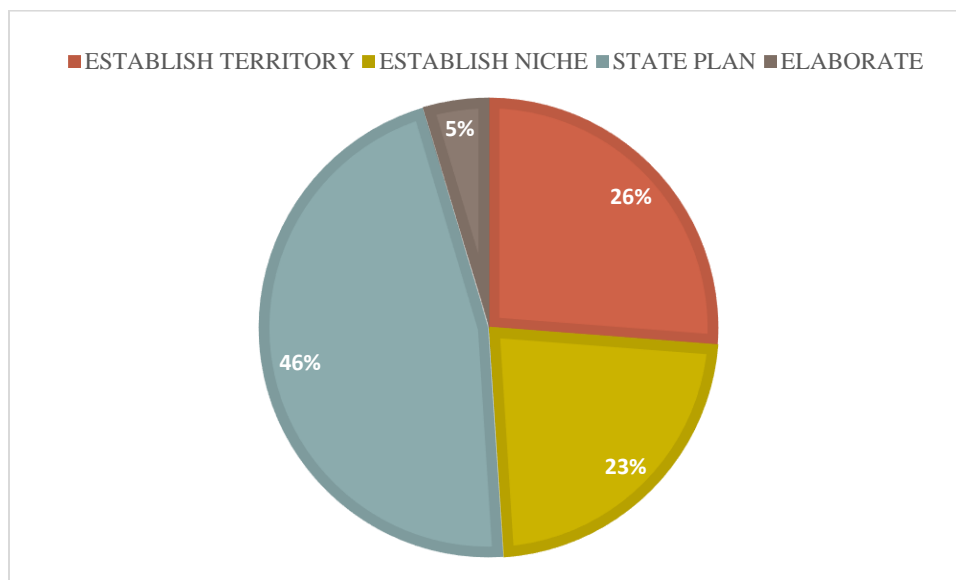
Figure 7.1. Average textual space in the introduction occupied by each move
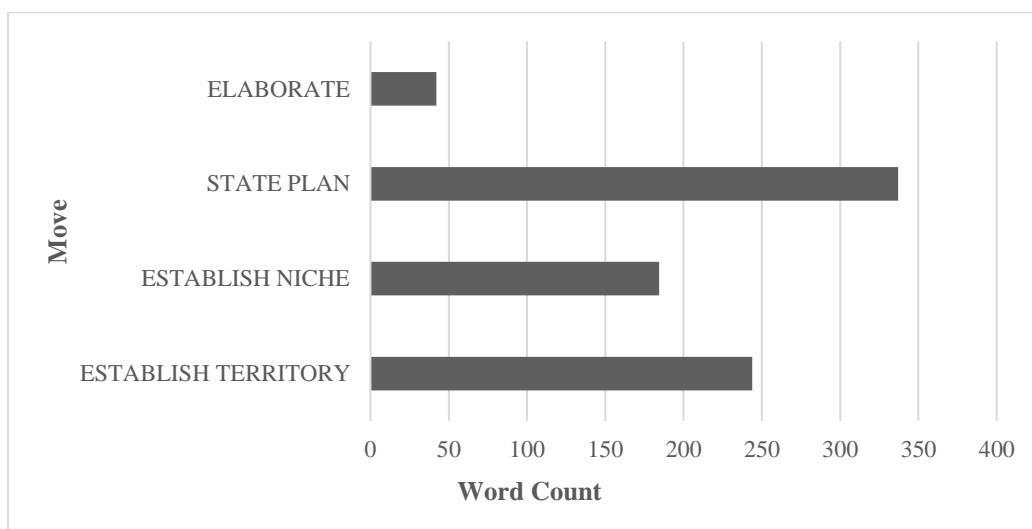
Figure 7.2. Average word count of introductory moves

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[85] Text coverage was calculated by taking the average number of characters in each coded function and dividing it by the average number of characters in each introduction.

It can be seen that, not only is STATE PLAN an obligatory move, it also accounts for the most amount of the textual space compared to the other functions, running on average approximately 337 words. This suggests that this move is particularly important in the introductions of philosophical works. Below, a more detailed description of each move and the most common steps used in each move is given.

7.1.2 Establish the Territory

The first move, ESTABLISH THE TERRITORY, functions as a means by which authors set up the broad topic and philosophical problem being dealt with in the RA. Two steps were found to be conventionally used to accomplish this move, and one step was found to be optional: (1) *summarize research*,[86] where the author discusses relevant literature on the topic; (2) *introduce topic*, in which the author makes topic generalizations, although other strategies to introduce the topic include raising questions and giving examples; and (3) *claim centrality*, where the author emphasizes the importance of the topic or issue. Table 7.2 provides an overview of this move and its corresponding steps.

Table 7.2. Steps used to ESTABLISH THE TERRITORY

Name	Description	Number of Texts	Percentage of Texts
ESTABLISH THE TERRITORY	Describe the central philosophical topic and problem.	55	92%
Introduce topic	Make topic generalizations about the problem.	47	78%
Summarize research	Discuss literature on the problem.	32	53%
Claim centrality	Emphasize importance of topic	4	7%

It can be seen that the most frequently used step is to *introduce topic*. While sometimes these topic generalizations do include citations or footnotes to references, the focal point of such statements is not that a particular author held a specific perspective on the topic; rather, the aim is simply to characterize either the philosophical topic or the problem. For example, the opening lines of Ney's (2020) article, which raises the question of whether metaphysics asks more fundamental

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[86] Steps will be italicized to contrast them with macro-moves and moves.

questions than those in science, makes generalizations about a particular approach in philosophy known as *naturalized metaphysics*:

> The project of naturalized metaphysics appears straightforward. Start with one's best scientific theories and infer one's metaphysical commitments from what these theories say exist, the sort of ideological frameworks they employ (p. 695).

On the other hand, when the step *summarize research* is used, more attention is drawn either to the specific author making the claim or to the fact that a group of authors endorse some viewpoint, as Faraci and Shoemaker (2019) do below:

> In a remarkable series of studies, George Newman, Joshua Knobe, and colleagues have been making a strong case that most of us believe in the better angels of our nature, that is, we believe that our fellows are, essentially, good (p. 606).

While *summarize research* was a common strategy used by philosophers, two points are worth highlighting about this step: First, even when discussing other works, such as in the example above, such references are used to narrow the focus of the RA and pinpoint relevant philosophical topics and problems that will be dealt with. This appears to play a somewhat nuanced role compared to how literature is often discussed in other fields: Whereas literature reviews in the natural and social sciences often aim at synthesizing and discussing studies related to the main topic in order to show that some area of the territory remains unexplored, in philosophy the discussion of literature helps bring the central problem into focus, and the literature serves as the background against which one profiles their argument. Second, many introductions do not discuss literature at all. This is in contrast to other fields and disciplines. For instance, Kanoksilapatham (2015) found that in three engineering sub-disciplines (civil engineering, software engineering, and biomedical engineering), *reviewing previous studies* was a step used in 93%, 73%, and 98% of RAs in his corpus, respectively. This finding is also consistent with Samraj (2008), who found that MA theses in philosophy do not typically review literature in their introductions. This suggests that in philosophy, there is not a great deal of emphasis placed on showing that one is abreast in the literature, at least in the introduction. Perhaps one's knowledge of the literature is either borne out throughout the rest of the work, or perhaps philosophers simply do not place as much value on demonstrating that one is familiar with related studies. It is also possible that footnotes function as a means by which one can show their knowledge of the literature without having to discuss it in detail in the body of the work.

A final point of note about the ESTABLISH THE TERRITORY is that *claim centrality* was scarcely used in the corpus. This was also consistent with Samraj's (2008) findings for MA students in philosophy. The lack of such promotional rhetoric, which Wang and Yang (2015) connect with the aim of giving positive evaluation to one's research topic, suggests that philosophers do not feel compelled to motivate research in a specific territory by emphasizing its importance. On one hand, this may be because the identification of a philosophical problem is, by itself, sufficient for convincing audiences that a solution is needed. On the other hand, while the specific philosophical problems of the RAs are often nuanced and represent new lines of inquiry, the more general philosophical problems to which they belong are often perennial problems, and thus it would not seem necessary that authors sell the importance of their work to their audience, for, presumably, philosophers have been brought up and educated with an understanding that such problems are central issues in philosophy. Future research might examine whether relatively new branches of philosophy make more use of promotional rhetoric in their introductions, for in these cases, the importance of such issues might not be engrained in the audience.

7.1.3 Establish the Niche

ESTABLISH THE NICHE functions as a means whereby authors create exigence for their work, typically by problematizing within the territory outlined in the previous move. Since philosophical RAs aim at addressing philosophical problems, this move is usually accomplished by utilizing strategies that show that a problem remains unaddressed. This move is distinct from ESTABLISH THE TERRITORY since the latter is more focused on *describing* a philosophical domain while ESTABLISH THE NICHE is more concerned with *motivating* the focus on that domain or the specific purpose of the RA. Indeed, even when authors describe a philosophical problem when making the move ESTABLISH THE TERRITORY, they do not create a sense of exigence. Another distinction is that, when authors ESTABLISH THE NICHE, they usually pick out some sub-problem within a broader philosophical problem-area. Since 15% of the corpus did not use this move at all, this indicates that sometimes a description of the broad philosophical problem-area alone is deemed sufficient for preparing audiences for the RA's purpose. This may be explained by two factors: First, perhaps in cases that lack ESTABLISH THE NICHE, authors feel that a description of the problem-area indirectly creates exigence for the purpose, and thus no explicit motivation in needed. Second, the interpretation above would seem to suggest that introductions are persuasive, for

niche-building involves an attempt to convince audiences that a research aim or that a focus on a problem domain is well-motivated; however, perhaps some authors are not focused on this perlocutionary aspect; rather, perhaps they are merely concerned with the orienting function of introductions: The aim is simply to lay out the philosophical problem and one's purpose. At any rate, most introductions contain the move ESTABLISH THE NICHE, implying that it is a conventional aspect of philosophical writing to attempt to create a sense of exigence.

Table 7.3 below provides an overview of the strategies used to accomplish the move ESTABLISH THE NICHE.

Table 7.3. Steps used to ESTABLISH THE NICHE

Name	Description	Number of Texts	Percentage of Texts
ESTABLISH THE NICHE	Motivate one's central purpose.	51	85%
Indicate ongoing issue	Point out an unresolved philosophical problem	33	55%
Criticize previous work	Negatively evaluate another philosophical argument	22	37%
Motivate position	Positively evaluate an argument or focus	17	28%
Indicate possible solution	Identify a potential solution to a problem	7	12%
Raise question	Raise a question that indicates a philosophical problem	7	12%
Indicate gap	Identify a lack of previous research in some area	6	10%

The only conventional step used to accomplish this move was *indicate ongoing issue*, where authors make explicit that some philosophical problem remains unsolved, often in spite of attempted solutions. For example, in the excerpt below, Sripada (2017) points out that two separate approaches to understanding moral responsibility rely on the same set of examples as evidence:

> It is troubling that the same set of stock examples are widely cited in support of these starkly opposed views of moral responsibility. These examples can't provide support for one view over the other because the two views make the same predictions about them (p. 782).

The author's use of language (e.g., "it is troubling") makes it clear that there is an issue that needs to be addressed. This example also illustrates how authors establish sub-problems within larger problem-areas: The broad philosophical domain in this case involves how best to understand moral responsibility. The passage above comes after Sripada has already made clear that there are two conflicting approaches to the problem. That both approaches argue that the same types of cases provide support for their position thus represents an additional problem that needs to be dealt with. The other strategies used to accomplish this move were all optional. The most common of these optional strategies was *criticize previous work*, which involves the negative evaluation of solutions to philosophical problems. Such criticisms show that there is a remaining problem that is in need of new attempted solutions. For example, in the excerpt below, Cohen (2020) takes a critical stance towards previous accounts that attempt to explain the role of feelings in Kant's philosophy:

> Those who discuss them [the role of feelings in Kant's philosophy] at all tend to put forward rather impoverished accounts that take feelings to be mere brute sensations or insignificant intermediaries between cognition and desire (p. 430).

This negative evaluation helps Cohen to motivate her project of offering a new account of Kant.

Motivate position involves offering some form of positive evaluation with respect to either the author's own purpose or the specific problem that they will work with. For example, after announcing the purpose of his paper, Stan (2019) explicitly walks the audience through three reasons that motivate this focus. In other cases, authors motivate framing an issue in a particular way. For example, consider the following passage from Enoch (2020):

> This complex starting point—that consent matters and that it is suspicious—should be, as far as I can see, everyone's starting point. Its plausibility does not depend on any "ism" in ethics or in political philosophy. Historically, I think it is fair to say that liberalism has been more often associated with taking consent to be a big deal, whereas some other isms (Marxism, for instance) tend to emphasize more the suspicions about consent's role. But at the end of the day, we should all accommodate both consent's significance and the suspicions about it. (p. 160).

Here, Enoch is not just motivating the specific purpose of his work: he is also justifying why it is important to begin approaching solutions to a problem from a particular point of view. It should also be noted that *motivate position* is distinct from *claim centrality* since the latter is concerned with emphasizing the importance and significance of the broader territory whereas the former attempts to justify a more specific focus related to the author's purpose.

The other three strategies were not frequently used. *Indicate possible solution* typically involves hypothesizing that some solution might solve the philosophical problem. This step is often used as a segue into the move STATE PLAN, for before the author explicitly lays out their specific position, they prime the audience for this thought by noting that some position seems to hold promise as a solution. The strategy *raise question* typically represents the focal research question of the work; however, this strategy is not grouped under STATE PLAN since it is does not function as a research question; rather, it functions as a way of framing some new problem, which creates a sense of exigence that there needs to be a solution. This allows the author to then segue into announcing the purpose. Finally, *indicate gap* involves identifying an area where there has been a lack of previous research, which motivates focusing attention in this area. For example, in the passage below, Machery et al. (2017) utilize this strategy:

> At this point, however, little is known about how the concept(s) of knowledge underlying standard translations of "S knows that p" in other languages deal with Gettier cases (p. 647).

This last finding is consistent with Samraj (2008), who found that MA students did not use *indicate gap* as a strategy. The limited use of this strategy in this dissertation's corpus is especially noteworthy given its predominance in other fields and disciplines. For instance, move analysis researchers have found that *indicate gap* was used by 96.7% of writers in a 30 RA corpus in the discipline of management (Lim, 2012), by 86%, 92% and 76% of writers in 60 RA corpora in the fields of civil, software, and biological engineering, respectively (Kanoksilapatham, 2015), and by 83% and 50% of writers in 12 RA corpora in wildlife behavioral and conservation biology, respectively. The explanation for this difference may lie in the dialectical nature of philosophical discourse: Because philosophers are constantly in dialogue with each other's arguments, it might be less common for writers to point out areas that have lacked discussion and more common to point out areas that have been problematic in past discussions. There may also be a distinction in terms of how the research contribution is framed: *Indicating a gap* seems to presuppose that audiences agree that there is a set stock of knowledge about a particular domain. Furthermore, this also seems to presuppose that most members agree that certain methodologies lead to the creation of knowledge (or at least the arguments are deemed as highly probabilistic); however, in philosophy, there may be less consensus that there is a stock of knowledge and that certain methodologies will produce new knowledge. After all, for one domain of philosophy, the very

concept of knowledge—what it means and how we obtain it—is up for grabs. As a result, this may lead philosophers to create exigence and to frame their niche more in terms of ongoing problems and issues than in terms of knowledge gaps. At any rate, the lack of this strategy is a highly distinctive feature of philosophical writing compared to the other disciplines.

7.1.4 State Plan

The move STATE PLAN functions as a means by which philosophers make clear the purpose of their work and their broader argument. As was noted above, this was the only obligatory move, and it occupied a notable portion of the textual space of introductions. The name of this move was changed from the typical Swalesian label of "occupy the niche" since most of the textual space in this move is dedicated to outlining and summarizing one's argument (i.e., the step *summarize plan*—see Figure 7.3), which would suggest that the purpose of the move is more than just letting audiences know that the paper addresses the niche. Table 7.4 shows an overview of this move and the most common steps, and Figure 7.3 shows the average word counts for each step.

Table 7.4. Steps used to STATE PLAN

Name	Description	Number of Texts	Percentage of Texts
STATE PLAN	Describe one's purpose and argument.	60	100%
Summarize Plan	Describe the argument and structure	53	88%
State Goals	Describe the purpose of the paper	52	87%
Announce Upshot	State the significance of one's argument	20	33%
Qualify Purpose	Refine the focus of one's purpose	19	32%
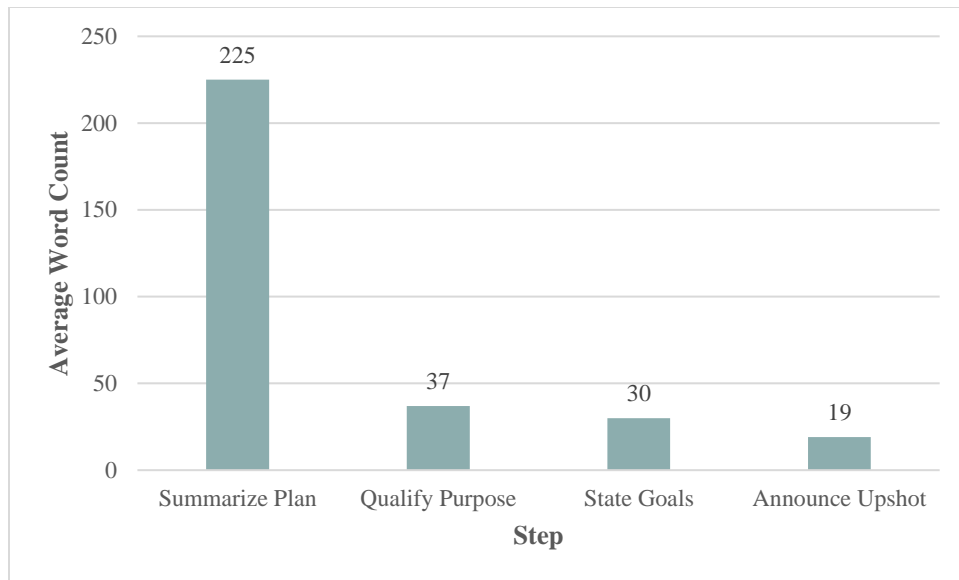
Figure 7.3 Average word counts for steps in Move STATE PLAN

The most conventional step used in this move was *summarize plan*, which also had the highest average word count, far exceeding the other steps. This step is carried out by two separate strategies: (1) *summarize the argument*, where the author describes the nuts and bolts of their argument, and (2) *announce structure*, where the author outlines in chronological order the argumentative steps that they will take. It should be noted that these strategies were grouped together into a single step since often both strategies are used simultaneously; however, in other cases, they are used in distinct parts of the text, typically with the outline of the structure following the summary of the argument, as can be seen in the excerpt below taken from D'Ambrosio (2019):

> My central claim is that there are strong empirical and theoretical reasons to treat the verbs we use in our semantic theorizing—including 'refers (to)', 'applies (to)', and 'is true (of)'—as intensional transitive verbs (ITVs). ITVs have two readings: an intensional, de dicto reading as well as a relational, de re reading…(p. 215)

> My argument begins by showing that, in English, semantic verbs like 'refers (to)' and 'applies (to)' exhibit all of the features of intensional transitive verbs. However, in English these verbs are used to report things that speakers do: they are used to report speaker's reference and application. But when these verbs are used to state the semantic features of words, as they are in semantic theorizing, they are used technically. Accordingly, I provide several arguments that the technical usage should incorporate the intensional features of the natural-language expressions. First, I argue that all theories of semantic reference appeal to speaker's reference in their explanations—a fact that is rarely acknowledged—and so semantic reference should inherit the intensionality of speaker's reference. I then argue that our

253

technical terms ultimately need to be explained using non-technical vocabulary that we already understand, especially when such vocabulary is readily available. Further, in the case of our semantic verbs, there are practically no theoretical disadvantages of incorporating ITVs into our semantic theory, because ITVs subsume the traditional, extensional semantic notions as special cases. Lastly, making use of intensional transitive verbs in our semantic theorizing is theoretically enriching in a number of important ways, one of which is that it provides us with a novel mechanism for consistently expressing the two forms of semantic theory discussed above. But the view also allows us to make headway on several recalcitrant problems in the philosophy of language and the foundations of semantics, including the problem of empty names and the Foster problem, along with its intensional variant (p. 216-217).

This example shows the level of detail that is sometimes dedicated to carrying out this step. After summarizing the main claim being made in the paper (paragraph 1), the author then outlines at length how the argument will proceed. The predominance of this step is consistent with Samraj's (2008) study of MA theses in philosophy as well as Martín and Pérez's (2014) study of RAs across 4 disciplines (one of which was political philosophy); however, it conflicts with Peters (2011) who found that 2 of 3 professional writers in philosophy did not outline their arguments. This inconsistency is perhaps explainable by the small sample size of Peters work as well as the fact that his study dealt with a particular domain of philosophy (philosophy of education). Two other points are worth noting: (a) Martín and Pérez (2014) found that while *outlining structure* was conventional for English writers in political philosophy (70% of RAs), it was only optional for Spanish writers (35% of RAs). While the authors do not explicitly comment on this specific difference, they do more broadly argue that some cross-cultural differences may be attributable to sociocultural factors, for example, to directness in speech. (b) This step varies across fields and disciplines, being probable in some and unlikely in others (Swales, 2004). For example, Kanoksilapatham's (2012, 2015) study found that half of software engineering RAs used this step, but only 10% of biomedical engineering RAs did so. Kanoksilapatham hypothesized that the common occurrence of this step in software engineering may be due to the lack of firmly established conventions for organizing RAs, an explanation which has been offered by other authors as well (e.g., Martín & Pérez, 2014; Posteguillo, 1999). This explanation likewise applies to philosophy, as there is no set macro-organizational structure (discussed in the previous chapter). Indeed, even though there are conventional macro-move structures, even in these cases, the section headers are typically given content rather than functional labels. Thus, by summarizing one's argument in advance and giving the reader a road map of what is to come, philosophers accomplish

what is typically taken for granted in fields that follow highly conventional structures (such as the IMRD format), namely, that readers will have a mental map in advance of how the article will proceed.

The other highly conventional step used to carry out STATE PLAN is *state goals*. Here, rather than providing a summary of one's argument, the author states the main aims of the paper, which is typically done in only 1-2 sentences (which can be seen by the average word count listed in Figure 7.3). On the other hand, *announce upshot* and *qualify purpose* were both optional steps. The former involves an identification of why the research matters more broadly outside of its narrow focus. This typically occurs after the strategy *state goals*. For example, in the segment below, Schectman (2016) notes the significance of her research project:

> Distinguishing these notions is significant for early modern scholarship. For it allows us to recognize that scholarly work on infinity in the period is sometimes either underspecified (when scholars do not make clear what notion of infinity they interpret a text as discussing) or mistaken (when they interpret a text as discussing one notion although it is discussing another). It may be of interest also for contemporary thought, insofar as reflection on the varieties of infinity in seventeenth-century philosophy may bring to light neglected yet possibly attractive resources for theorizing about infinity (p. 1119).

This step is distinct from *motivate position* used to ESTABLISH THE NICHE since *announce upshot* focuses on important consequences and implications of one's argument; it is not an attempt to justify and motivate the article's focus.

Finally, *qualify purpose* involves clarifying and further refining the purpose of one's work. This step is used to make sure that audiences are not led astray in terms of what the author will focus on. This step is interesting because several authors spend a considerable amount of time refining their purpose: Over 100 words were used to carry out this step in 7 RAs, and at the extreme end, one RA spent 483 words clarifying their purpose. For example, the text segment below is only one part of a series of qualifications given by Ney (2020):

> Before we begin, I should emphasize that the question with which I am concerned in this paper is whether metaphysics may be more fundamental than science in some metaphysical sense of 'fundamental.' The question is not one (or not directly one) of relative importance. We do often use the word 'fundamental' in ordinary language to mean important, but the philosophers I will discuss are careful to distinguish a claim of metaphysical fundamentality from one of importance (p. 696).

This segment is exemplary of the step: authors will typically clarify uses of language, assuring that the framing of the problem is not misunderstood due to ambiguities and vagueness.

This step is also of interest because it has not been identified in previous move-analysis research on introductions, although the step *definitional clarifications* (Swales, 2004) might be seen as one strategy that authors use to make qualifications.

7.1.5 Elaborate

ELABORATE is a systemic function, found to occur throughout the text in all macro-move sections. The next chapter will deal with this function in more detail; here, my main goal is simply to explain why the function was not subsumed under the other moves. First, however, let me briefly explain the function. ELABORATE is used to provide additional details pertinent to the broader function under which it is grouped. In this case, being grouped under INTRODUCE PROBLEM AND PURPOSE means that there were several text segments that added additional information to help further orient the reader to the problem-area and purpose; however, it was not clear whether this content specifically advanced one of the moves identified above. For example, sometimes authors offer linguistic clarifications to terms that appear throughout the introduction; thus, it is not clear whether such clarifications help to advance just a single move or all three. Another common case involves block quoting materials from other authors. As this function will be dealt with more comprehensively in the next chapter, this is all I will say on the matter for now.

7.1.6 Conclusions on Introduction Moves and Steps

The results of this move and step analysis of philosophy RAs is largely consistent with the little extant research that has applied move analysis frameworks to the introductions of philosophical writing (Martín & Pérez, 2014; Samraj, 2008): Philosophical writers conventionally outline the organization of their RAs, and they seldom use *assert centrality* and *indicate gap* as steps. This study has also found that the move STATE PLAN is particularly noteworthy due to the fact that it is the only obligatory move and because the move occupies the most amount of textual space. This suggests that the most important function in the introductions of philosophy RAs is to make clear one's argument and the argumentative structure of the work.

This raises the question of how apt it is to think of the function of philosophy introductions in terms of the Swalesian (1990) "create a research space" model. This model grew out of and has largely been applied to introductions that involve a review of some broad domain of research

followed by the creation of niche within that domain that demands continued research attention, often because there is a gap in the research community's current knowledge. In contrast, philosophers seem less concerned with building their introduction in this way. As was noted above, for example, literature reviews in philosophy RA introductions are uncommon, and in fact sometimes philosophy introductions contain no references to other works (e.g., in the philosophy RA corpus, see Graham, 2020; Hare, 2016). Without engaging the surrounding literature, the Swalesian sense of the phrase 'create a research space' does not seem apt. Furthermore, although cases that altogether lacked references in the introduction represent a minority in the corpus, the fact that they were accepted by some of the most prestigious journals in the field suggests that such functions are not deemed essential when writing an introduction; rather, in philosophy, what does seem essential is that the audience is sufficiently oriented in terms of understanding the purpose and plan of the work.

7.2 Moves and Steps in the Body of the Work

The three macro-moves used in the body of RAs in philosophy—DISCUSS PROBLEM, DISCUSSION SOLUTIONS, and ADVANCE ARGUMENT—were all accomplished through the use of the same types of moves. This section will first provide a characterization of these moves as well as how prominent they were for each macro-move. The section will mostly focus on rhetorical moves, but for one important move—EVALUATION—the steps will also be reviewed. Next, the section will provide a close study of the strategies used to accomplish two prominent steps.

7.2.1 Overview of Moves and Steps in Body Macro-moves

It was found that DISCUSS PROBLEM, DISCUSSION SOLUTIONS, and ADVANCE ARGUMENT each make use of 5 core moves, corresponding to the illocutionary functions of *comparing*, *describing/summarizing*, *evaluating*, *inferring*, and *justifying/explaining*. Table 7.5 shows the number of texts that make use of each of these moves as well as their average word counts.

Table 7.5. Moves used in the body macro-moves

Name	Number of texts	Percentage	Mean Word Count[a]
DISCUSS PROBLEM	52	87%	1,606
COMPARE	6	10%	6
SUMMARIZE	52	87%	976
DRAW INFERENCE	31	52%	109
EVALUATE	31	52%	294
EXPLAIN	27	45%	155
DISCUSS SOLUTIONS	59	98%	2,144
COMPARE	11	18%	42
SUMMARIZE	58	97%	765
DRAW INFERENCE	33	55%	98
EVALUATE	54	90%	996
EXPLAIN	24	40%	163
ADVANCE ARGUMENT	60	100%	5,322
COMPARE	22	37%	126
SUMMARIZE	60	100%	1,911
DRAW INFERENCE	57	95%	526
EVALUATE	57	95%	1,544
EXPLAIN	52	87%	874

[a] The average word count is calculated by dividing the total number of words for each function by 60 (the number of articles in the corpus). This is why some word counts are so low (e.g., COMPARE under DISCUSS PROBLEM).

It can be seen that only one move was obligatory, SUMMARIZE ARGUMENT.[87] Many, however, were highly conventional e.g., EVALUATE ARGUMENT, DRAW INFERENCE ABOUT ARGUMENT, SUMMARIZE SOLUTION, etc. It is also notable that COMPARE was always optional, no matter the macro-move that it was used with. In terms of average word counts, it can be seen that SUMMARIZE and EVALUATE had the longest average word counts for each macro-move. In fact, for the macro-move DISCUSS SOLUTIONS, EVALUATE SOLUTION had on average a longer word count than SUMMARIZE SOLUTION. This shows the importance placed on evaluating the solutions of others. Furthermore, the distribution of word counts within each macro-move shows that ADVANCE ARGUMENT draws more upon a wider range of functions than the others. On the other hand, DISCUSS SOLUTIONS mostly centers on two functions (SUMMARIZE and EVALUATE), and DISCUSS PROBLEM is mostly centered on the function SUMMARIZE. Summing the word counts across all three macro-moves gives a general sense of which functions are most prominent throughout the RA, shown in Figure 7.4.

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[87] To identify which macro-move each move belongs to, I will use "argument", "solution", and "problem", corresponding to each of the three macro-moves. For example, COMPARE SOLUTIONS is the COMPARE move for the macro-move DISCUSS SOLUTIONS.
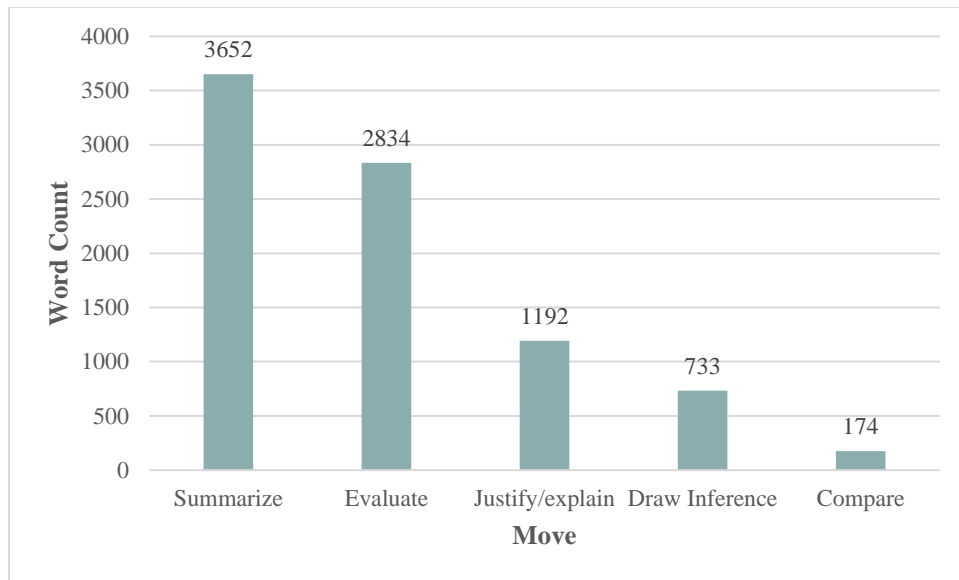
Figure 7.4. Summed average word counts for types of rhetorical move

The figure shows that a majority of the textual space in the philosophy RA corpus was spent summarizing and evaluating philosophical problems and arguments. Less, but not an insignificant amount of time, was spent explaining and drawing inferences about problems and arguments. Finally, on average, very little time was spent comparing arguments, and typically, texts did not use this function at all.

In what follows, more details will be given about each of the five functions.

7.2.1.1 Compare

The move COMPARE functions as a way of juxtaposing two positions to examine similarities and differences. Importantly, this does not involve evaluating either of the positions. For example, in the segment below, Rowland (2017) compares his account to another to help illuminate his position (COMPARE ARGUMENT).

> A comparison with contextualism in epistemology will further clarify the prospects of non-naturalist realism in comparison to relativism if there is significant fundamental moral disagreement. (i) Skeptical hypotheses cast doubt on much of, but not all of our knowledge; they do not cast doubt on our knowledge that we know that there is thought when we are thinking or our knowledge that we do not know everything for instance…(p. 819).

While in this case, the intended effect was merely to clarify the author's own position, in other cases, COMPARE eventually leads to an evaluation of some position, and thus, it arguably straddles the line between COMPARE and EVALUATE; however, if the author at first simply points out similarities and differences between accounts without casting judgement, these were classified as COMPARE.

COMPARE was the most infrequently used move for all three macro-moves (being optional in each case), and it had the shortest average word counts for each macro-move. This is explainable by the fact that so much of the examination of other accounts in philosophy is done for the sake of evaluation. When considering other accounts or solutions, often the move sequence involves first summarizing some position and then evaluating it. Seldom do philosophers draw attention to similarities and differences without engaging in evaluation simultaneously. This seems to be in stark contrast to other fields, where the results of studies are commonly compared without evaluation.

7.2.1.2 Summarize

The move SUMMARIZE should be understood in a broad sense to encompass both the description and analysis of some argument or problem in philosophy. While providing a summary and analysis are distinct cognitive acts, it can be difficult in practice to tell them apart, and thus the functions were grouped together to simplify the coding process. Furthermore, as will be discussed in greater detail below, it can also be challenging to tease apart the functions EXPLAIN and SUMMARIZE. For example, in the text segment below, Hirji (2019) outlines her main argument, making the move SUMMARIZE ARGUMENT:

> On the view I am defending, what makes this action good, a species of virtuous action, is that it aims to achieve a good end in the political community; if there wasn't someone in need of shelter who stood to be benefitted, then this action would not be appropriate or called for in the circumstances. And what motivates the virtuous agent is precisely this end: in performing this generous action, the virtuous agent is responding to the fact that someone deserving in the polis can be benefitted by having access to shelter. When she performs the action, she does so with a full rational appreciation of why this end is good, and with desires in accordance with her rational judgment. Moreover, she effectively deliberates about the best way to achieve this end (p. 688).

As can be seen, there is some ambiguity here as to whether the sentence beginning with "And what motivates…" should be viewed as part of the summary or an explanation of the author's main point. In this case, it was deemed that the author was still in the process of outlining her core argument rather than explaining it. Admittedly, this largely depends on how one conceptualizes the main argument of the work. If one took an extremely narrow approach, the author's main position might simply be viewed as a conclusion, with any premises serving as either justifications or explanations. This dissertation tried to take a moderate position, distinguishing between a core argument that an author gives and their explanations and justifications for that argument.

One might expect to see this move occur at the beginning of each macro-move and not be used again until moving onto another macro-move; however, this was not the case. While the move does typically occur first (for how could one evaluate, compare, explain, or infer without first summarizing the material that will be used for these cognitive acts), it is often recycled, for authors will frequently summarize and comment on one part of an argument before summarizing and commenting on another. For example, in the excerpt below, Lackey (2020) begins a second part of her analysis:

> The duty to object also shares the second feature said to be true of imperfect duties: it is possible to do more than what the duty to object requires, where such excess has both moral and epistemic value. (p. 51).

It should also be noted that each SUMMARIZE move was accomplished through several steps, for example, *describe and analyze argument* and *provide background*. While the two aforementioned steps were found in every SUMMARIZE move across all three macro-moves, other steps were unique. For example, under the macro-move ADVANCE ONE'S OWN ARGUMENT, one unique step was *describe results*. This steps was highly specific, being found only in experimental philosophy articles. In addition, under the move SUMMARIZE ALTERNATIVE POSITION, a unique step was *summarize response to solution*. This step involved providing a summary of how some other philosopher (rather than the author of the article) responded to an alternative solution. Thus, while SUMMARIZE was used for all three macro-moves, the means by which this move was carried out sometimes differed.

The move SUMMARIZE was the most frequently used move for each of the three macro-moves, and SUMMARIZE ARGUMENT was found to be obligatory. In terms of word counts, this function took up the most amount of textual space for two of the three macro-moves, the exception being DISCUSS ALTERNATIVE SOLUTIONS, where the EVALUATE function had a higher average

word count. These results suggest that summarizing and analyzing arguments and problems are some of the most fundamental rhetorical functions used in philosophy.

7.2.1.3 Draw Inference

DRAW INFERENCE involves considering an implication of one's argument, the problem, or the solution of another. Importantly, this does not involve the making of *any* inference whatsoever; rather, it involves the making of an inference about some large chunk of discourse. For instance, when authors set up their argument in a way in which they proceed from their premises to their conclusion, the drawing of their conclusion is not considered DRAW INFERENCE, for in such cases it would be considered as part of SUMMARIZE. On the other hand, when authors consider the results or consequences of some account, this would be an instance of this move. For example, in the excerpt below, Di Bello (2019) considers an implication of one approach to estimating a probability ratio concerned with the likelihood of guilt or innocence for defendants:

> A consequence of this is that the prior ratios assigned to defendants will likely be different depending on the characteristics of each defendant. For example, if young people in their late twenties commit violent crimes at higher rates than elderly people, an elderly defendant who is charged with a violent crime should be assigned a lower prior ratio than a young defendant charged with the same type of crime (pp. 1056-1057).

Admittedly, this move is sometimes challenging to tell apart from a summary, for in a similar way to how identifying where SUMMARIZE begins and ends can be problematic, this too requires that the core argument, problem, or solution be determined before implications can be identified.

This move was conventional for each macro-move, but it was more conventionally used for ADVANCE ONE'S ARGUMENT than the others: DRAW INFERENCE ABOUT ARUGMENT was used in 95% of texts and on average was 526 words, whereas DRAW INFERENCE ABOUT PROBLEM and DRAW INFERENCE ABOUT ALTERNATIVE SOLUTION were only used in 52% and 55% of texts with average word counts of 109 and 98, respectively. This suggests that considering implications of one's own argument is a more important rhetorical function than doing so for the arguments of others and the philosophical problem. This may be because much of the rhetorical focus beyond summarizing the arguments of others is evaluative in nature; thus, when considering the consequences of another's view, philosophers are more concerned with how implications are

problematic rather than what the implications are *per se*. While this evaluative focus on implications also sometimes holds for one's own argument, often philosophers seem to be merely interested in what their argument suggests for broader philosophical issues.

7.2.1.4 Evaluate

EVALUATE involves critically judging a philosophical argument or problem. This includes both positive and negative judgements, although as will be explored below, negative evaluations tend to be more common. Depending on the macro-move in which EVALUATE occurs, the evaluation may be attributed to different evaluators: When occurring as part of ADVANCE ARGUMENT, negative evaluations are typically attributed to other authors or to hypothetical interlocutors (e.g., "one might object…"). For example, in the segment below, D'Ambrosio (2019) considers an objection to his account, and this negative evaluation is attributed to a possible interlocutor.

> However, one might worry that, even given the data above, speakers' judgements are not being driven by the presence of a genuine reading of the sentence whose presence needs a semantic explanation, but are instead being driven by pragmatics. After all, it is common practice to attempt to explain, or explain away, substitution failure within the contexts of attitude verbs by appealing to pragmatics (p. 232).

On the other hand, when making the move EVALUATE within the macro-move DISCUSS ALTERNATIVE SOLUTION, negative evaluations are typically attributed to the author of the text, as in the example below where Folescu (2018) objects to how other authors have understood the philosopher Thomas Reed:

> I disagree. Reid believes that inductive inference is to be used to discover the right way to act, whenever necessary. He doesn't explain in great detail how we should use 'probable reasoning', as he calls it, in moral deliberation…(p. 470).

EVALUATE was highly conventional for the macro-moves DISCUSS ALTERNATIVE SOLUTION and ADVANCE ARGUMENT, with each occurring in at least 90% of the texts. It also had the second highest word count of the moves overall, and for DISCUSS ALTERNATIVE SOLUTION, the word count was, on average, longer than even SUMMARIZE. This suggests that, after summarizing and analyzing arguments (whether one's own or those of another), evaluations are the most important type of commentary offered by philosophers. For this reason, it is worth considering the steps that are used in conjunction with EVALUATE. Table 7.6 provides an overview

of the steps, including the percentage of texts that made use of each step as well as the average word counts.

Table 7.6. Steps used to EVALUATE

Name	Number of texts	Percentage	Mean Word Count
EVALUATE PROBLEM	31	52%	294
Critique Problem	18	30%	147
Establish Criteria	14	23%	32
Summarize Objection	11	18%	27
Give Positive Evaluation	15	25%	35
Respond to Objection	10	17%	53
EVALUATE SOLUTION	54	90%	996
Critique Solution	50	83%	677
Establish Criteria	18	30%	24
Summarize Objection	24	40%	96
Give Positive Evaluation	25	42%	88
Respond to Objection	25	42%	111
EVALUATE ARGUMENT	57	87%	1,544
Summarize Objection	52	87%	393
Establish Criteria	20	33%	27
Give Positive Evaluation	39	65%	231
Respond to Objection	50	83%	893

It can be seen in the table that each macro-move used the same types of steps to EVALUATE; however, EVALUATE ARGUMENT does not contain the step *critique* since the way authors negatively evaluate their own position is by the step *summarize objection*, which involves considering a negative evaluation made by another philosopher or by a hypothetical interlocutor. Distancing one's self from self-criticism in this way makes sense in the respect that, if the author actually believed the criticism was effective against their account, then they should have changed their mind and argued for a different position. Hence, it would not make sense for authors to self-author criticisms (e.g., "My account is problematic because…"). The table also shows that all steps were optional for EVALUATE PROBLEM and that all but one step was optional for EVALUATE SOLUTION (the exception being *critique solution*, which was conventional). On the other hand, 3 of the 4 steps were conventional for EVALUATE ARGUMENT, implying that this move is typically accomplished by using several functions.

Three of the steps are frequently used in conjunction with one another: *critique*, *objection*, and *response*. Essentially, these steps really amount to just two functions: criticisms against a view and responses; however, for macro-moves 1 and 2, three such functions were used since authors will sometimes first make a criticism, then consider an objection to the criticism, and then respond to the objection. On the other hand, for their own accounts, authors simply consider objections rather than make criticisms. The first step in this sequence, *critique*, involves the author offering a negative evaluation of the problem or a solution to the problem. In the case of philosophical problems, *critique problem* involves critiquing either the way that a problem has been framed, or, if the central problem being dealt with is some philosophical account, it involves critiquing the argument. In the case of solutions, *critique solution* is a straightforward criticism of some author's attempted solution at a problem. As can be seen for EVALUATE SOLUTION, in 50 out of 54 cases this step was used, suggesting that negative evaluations of other accounts are almost always given by authors.

The next step in this sequence, *summarize objection*, involves considering a critical response from another philosopher or from a hypothetical objector either to one's own criticism or, in the case of macro-move 3, to one's own argument. It is interesting to note that in only around half of the 50 cases in which authors *critique solution* do they offer a potential response by making the step *summarize objection*; however, in every case in which they *summarize objection*, they also offer a response to the objection (*respond to objection*).[88] Likewise for EVALUATE ARGUMENT: When authors consider potential problems with their own account by making the step *summarize objection* ($n = 52$), they almost always respond to the criticism by making the step *respond to objection* ($n = 50$). In fact, it can be seen that considerably more time is spent responding to objections than actually summarizing them in EVALUATE ARGUMENT (on average 893 words are spent responding while only 393 are spent summarizing objections), and slightly more time is spent on responses for EVALUATE SOLUTION than on summarizing objections (111 vs. 96 words on average, respectively). This shows that it is nearly obligatory that an author offer some kind of response to a critical evaluation of their view (whether their own argument or their criticism). In

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[88] In fact, it can be seen that there are more cases of *respond to objection* than there are *summarize objection*. This discrepancy is due to the fact that De Rosa (2018) gives a response to an objection with the objection itself embedded within the response. This text segment was simply coded as *respond to objection*: "And it is not satisfactory to respond to this worry by pointing out that triggering causes are only supposed to explain the occurrence of sensory ideas at a particular time" (p. 710).

other words, when a negative evaluation is levied *against* an author's view, a response on the part of the author is almost always forthcoming. On the other hand, when authoring critical evaluations, it is more optional for the author to consider how one's opponent might respond.

The step *give positive evaluation* involves offering praise or positive assessment of an argument. For instance, in the segment below, Cohen (2020) offers a positive assessment of an alternative interpretation of Immanuel Kant's theory of emotions and feelings:

> Now, I am sympathetic with Guyer's view that it is hard to see how feelings can have intentionality in and of themselves, although I hold it on different grounds (p. 435).

It can be seen that negative evaluations are more common for each macro-move than are positive, although this is particularly notable for EVALUATE SOLUTION, where positive evaluations are given in only half the number of texts compared to negative evaluations. Furthermore, the amount of textual space put towards criticism compared to praise is even more pronounced when considering the fact that the three steps *criticize*, *summarize objection*, and *respond to objection* are all focused on negative evaluations. Nonetheless, it is noteworthy that for EVALUATE ARGUMENT, 65% of texts in the corpus do offer positive assessment for one's own argument. This often involves considering how one's argument is helpful in ways beyond solving the narrow problem at hand. For example, after offering an interpretation of Descartes' epistemology, Clark (2019) provides positive evaluation for this argument by noting how the exegesis illuminates other parts of Descartes' work:

> The distinction between these epistemic levels also helps clarify the senses in which 'scire' and 'scientia' depend on God. Descartes argues that the existence of a non-deceiving God is a metaphysically necessary truth, and that this grounds the claim that 'no one could possibly see, this [being mistaken] happening to those who have relied solely on the intellect in their quest for clarity in their perceptions' (p. 669).

The final step, *establish criteria*, is not an evaluation *per se*; rather, it involves setting up some evaluative criteria that can be used to judge whether an argument adequately addresses the philosophical problem. This step appears in different macro-moves depending on the larger rhetorical context: If an author is, for example, discussing their own account and they then consider criteria that their account should meet, this would be grouped under the move EVALUATE PROBLEM. For example, in the excerpt below, having reformulated Mill's harm principle in terms of non-consensual harms, Saunders (2016) notes that there are several features that his account (or future ones) will need to develop:

We still need some account of what interests people have and of valid consent. Mill notes that consent must be free, voluntary, and undeceived. We might add, in light of the unsafe bridge case, that it should be informed: one cannot consent to harms of which one is unaware. Further, one also needs the capacity to consent, hence Mill's restriction of the principle to those 'in the maturity of their faculties'…(p. 1026).

By offering this list of aspects, Saunders is providing an evaluative framework for anyone engaged in this discourse. In other words, if you want to give an adequate account of Mill's harm principle in terms of consent, your argument better account for [x], [y], and [z]. This is an interesting rhetorical function, for it makes criticisms and praise more forceful: By setting up criteria for solving a puzzle, it allows the author to explain why other accounts do not pass muster or why one's own is particularly forceful.

7.2.1.5 Explain

The final move, EXPLAIN, is actually a combination of two rhetorical functions: explaining and justifying. In everyday language, these terms are not precisely operationalized as speech functions, and thus there is often considerable overlap between them. For the purposes of this dissertation, the function EXPLAIN can be understood broadly as giving reasons in support of some statement (which clearly encompasses most everyday uses of the term "justify"). That said, there are more precise ways that these functions can be distinguished. One way involves distinguishing between giving support for abstract versus concrete claims and arguments. The former would more fittingly be called "justifications" while the latter would be "explanations".[89] In addition, as was noted above, sometimes distinguishing this function from SUMMARIZE was challenging since the central argument of the text must first be conceptualized before one can clearly identify support for the argument. A clear example of EXPLAIN is offered in the text segment below, where Nebel (2019) provides a justification for his semantic interpretation of a sentence (labeled '3a' in the text):

> Why think this reading of (3a) is correct? Why not think instead that that-clauses simply cannot denote the arguments of hopes for, and that they therefore cannot refer to the same things as proposition descriptions? The main reason is that my interpretation is a natural extension of what we observed about adjective complementation in section 2.1 (p. 73).

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[89] Special thanks to Chris Yeomans for raising this point.

This move was only optional when discussing the philosophical problem or the solution of others, but it was conventional when advancing one's own argument. This suggests that more time and effort is spent explaining and justifying one's own position than others or the broad philosophical problem, which is reflected in the higher average word counts for this macro-move; however, because of the demarcation problem noted above (between SUMMARIZE and EXPLAIN), it should be noted that other researchers might draw a tighter circle around the core of an argument or problem, which would often increase the perceived amount of time in which an author spends explaining and justifying.

7.2.2 Strategies used to Accomplish Key Steps

Typically, the step level was the bottom layer used to code rhetorical functions; however, in a few cases, a step was prominent enough that it was possible to distinguish different ways in which the step was carried out (referred to in this section as "strategies"). Two strategies are of particular interest: how authors advance their own arguments (falling under the step *describe and analyze argument* within the move SUMMARIZE ARGUMENT) and how authors go about criticizing alternative solutions (falling under the step *critique solution* within the move EVALUATE SOLUTION). This section analyzes and explains these strategies.

7.2.2.1 Argumentative strategies used to advance one's own argument

There were 6 main argumentative strategies identified in the corpus used to accomplish the step *describe and analyze argument* (part of the move SUMMARIZE ARGUMENT and the macro-move ADVANCE ARGUMENT). An overview of these strategies is provided in Table 7.7 below:

Table 7.7. Argumentative strategies used to advance one's own argument.

Strategy	Number of Texts[a]	Percentage of Corpus
Build theory	33	55%
Use case study	21	35%
Give interpretation	18	30%
Conduct conceptual analysis	15	25%
Criticize another position	10	17%
Conduct experiment	5	8%

[a]The numbers add up to more than 60 texts because several texts make us of multiple strategies listed above.

The most frequently used strategy was to build a theory to solve a philosophical problem. The term "theory" in this context is not meant to be technical, nor will a precise definition be given, but roughly, building a philosophical theory amounts to offering a set of inter-related propositions that attempt to explain some philosophical phenomenon. These propositions come in the form of general statements or principles that can be used to deduce consequences or predications about specific instances or cases. While this characterization surely under-describes what it is to be a philosophical theory, it allows this strategy to be demarcated from the others. In regard to how this strategy was identified in the texts, the authors themselves often explicitly refer to their arguments as "theories". In other cases, it is clear the arguments would putatively be called such. With respect to the former, Faraci and Shoemaker (2019), for example, provide arguments that the Good True Self (GTS) theory best explains certain philosophical intuitions. The authors explicitly refer to this position as a "theory", and their description and analysis show the properties discussed above, namely, that there are inter-related general principles.

> According to the Good True Self (GTS) theory, if an action is deemed good, its psychological source is typically viewed as more reflective of its agent's true self, of who the agent really is "deep down inside"; if the action is deemed bad, its psychological source is typically viewed as more external to its agent's true self (Faraci & Shoemaker, 2019, p. 606).

For cases where authors do not explicitly refer to a position as a theory, they do, nonetheless, formulate general principles that are used to account for the philosophical problem at hand. For instance, Hoek (2018) formulates general principles which he refers to as an "account" in attempting to provide a solution for philosophical puzzles concerning pragmatics in conversation:

Generalizing from this example, the contours of an account of exculpature begin to emerge. In cases of exculpature, the speaker's intended message *r* is determined on the basis of the literal content *p* of their statement, and two contextual clues: the contextual presupposition *q* to which the speaker appeals, and the subject matter *S* they address. The speaker's message *r* is the unique proposition that is (A) just about S and (B) equivalent to *p* given *q* (p. 164).

It should also be noted that in some cases, the strategy *theory building* was coded for when an author simply built upon an already existing theory as well as when they applied a theory to solve a puzzle.

The second most common strategy was to use a case study—frequently called a "thought experiment"—to solve a philosophical problem. Case studies involve the use of some specific, well-developed example to make a philosophical point. These cases are almost always hypothetical, and they can be further demarcated into different types, such as "tales" and "twin-earth thought fantasies", which were identified by Bloor (1996) (discussed in Chapter 4). Often, they are modified in the text to stand out, similar to block quotes, and they are also occasionally given names so that they can easily be referred to later in the work. For example, Hare (2016) uses both of these conventions in advancing cases, one of which is dubbed "six tracks":

> You see six tracks. On each track is a trolley, heading toward a pile of five suitcases. Above each track is a footbridge, on which is perched one suitcase. You can stop each trolley, but only by pushing the suitcase on the footbridge above it into its path. You learn that Alexia is in a suitcase in the vicinity of the first track (henceforth Alexia's track), either in the suitcase on the footbridge (henceforth Alexia's footbridge), or in one of the five suitcases on the track. The remaining five suitcases in the vicinity of Alexia's track are full of sand. Likewise, Benny is in a suitcase in the vicinity of the second track (henceforth Benny's track), with the remaining five suitcases in the vicinity of Benny's track filled with sand, . . . , and so on, for Cate, Dora, Emilio, and Frederico. Furthermore you learn that one and only one of them, you have no idea who, is on a footbridge (Hare, 2016, p. 458).

Cases studies are most often designed to elicit philosophical intuitions. After describing a case, such as the one above, authors typically draw their own intuition about the case and then provide justification for that belief. For example, in the case above, one might have the intuition that you should push each of the six suitcases on the footbridges onto the tracks, for this would save five individuals (although, tragically, it would kill one). These intuitions are usually then used to support or criticize philosophical approaches. Thus, cases are intricately tied up with philosophical theories, and often authors will use both of these strategies in conjunction. Nonetheless, the strategies were considered distinct since, often, cases are designed to elicit pre-

theoretical intuitions (although this point is heavily debated in the literature). In other words, case studies are frequently presented as a response to some philosophical problem to show that the right kind of theory has to accommodate a particular kind of case and intuition. In this sense, cases are used to make clear some philosophical phenomena (i.e., the intuitions) that need to be accounted for by a theory. It should also be noted that the use of case studies is by no means restricted to the move SUMMARIZE ARGUMENT. In fact, case studies can occur nearly anywhere in the text: they can be used to develop criteria for solving problems, to criticize other solutions, to characterize philosophical problems, and to offer explanations and justifications for a view.

The third most common strategy was to provide an interpretation of some philosophical work. 17 of 18 cases in this category came from the history of philosophy sub-corpus, suggesting that this strategy is the predominant argumentative strategy used in this domain. In the one exception, Bukoski (2018) criticizes a contemporary philosopher, Christine Korsgaard, and part of the argument relied on interpreting and critiquing the modern philosopher Immanuel Kant. This strategy involves providing an argument as to how to best understand the philosophical position of some historical figure. For instance, in the example below, Marušić (2016) advances her philosophical argument by making it clear that she will criticize an alternative interpretation of John Locke's epistemology and defend her own:

> It is exactly this claim that I wish to challenge: Locke does not think that sensitive knowledge is merely probabilistic; he thinks we have genuine, infallible knowledge of real existence through sensation (p. 211).

In most cases, this strategy involves paying careful attention to textual evidence; however, it is not uncommon for philosophers to draw inferences in regard to how an historical figure might go about addressing some unforeseen problem with the theory they developed.

The fourth strategy, conceptual analysis, involves taking apart some key philosophical concept in an effort to solve a philosophical problem. For example, the text segments below are taken form Lackey (2020), who argues that in certain circumstances, we have a moral duty to object to the positions of others:

> The duty to object differs in important ways from some other kinds of duties, both epistemic and moral. The first is that the duty itself seems subject to direct influence by what others are doing, especially those in the conversational context in question. (p. 40)

> Another feature of the duty to object that is not shared by many other duties is that it can be directly affected by social status. (p. 42)

As can be seen, the author is analyzing different aspects of the duty to object. In a certain respect, this might be seen as a sub-set of the strategy *build theory*, and indeed, there are several cases in which conceptual analysis does result in the construction of some philosophical theory. In the case above, for instance, Lackey ends up providing a philosophical account of the duty to object. Nonetheless, these strategies can be seen as distinct, for a conceptual analysis need not result nor rely upon interrelated principles or general statements. In the case above, for example, identifying different components of the duty to object does not immediately provide a philosophical theory of the duty to object; rather, it would seem the author must go further after the analysis and formulate a network of related principles. Another example helps to show the gap between analysis and theory:

> I am inclined to join many other philosophers in thinking that there are these two senses of 'desire'. There is a sense that is connected to voluntary action, intention, choice, and will…And there is a distinct sense of 'desire' that is connected with notions like enthusiasm, appeal, interest, excitement, and attraction (Heathwood, 2019, p. 673).

This analysis of ambiguous terms is quite common, but it seems clear that it doesn't rely on the author having to advance any philosophical theory to make the distinction; rather, the distinction relies upon the audience having a grasp of everyday concepts.

The fifth strategy involves criticizing another position. In these cases, the main philosophical point of the article was critical, that is, the author's own position did not involve advancing their own theory, interpretation, or analysis; rather, it was a criticism of another's view. For instance, in the segment below taken from the end of the introduction, Contessa (2016) makes it clear that this is the main philosophical strategy of the work:

> In a recent paper in this journal, Thomasson (2013) argues that the fictionalist's criticism of easy arguments is misguided. First, she accuses the fictionalist of begging the question against deflationism. Second, she maintains that the fictionalist's own interpretation of easy arguments is untenable. In what follows, I examine these two charges in turn and find them both unsubstantiated (p. 765).

The final strategy, conduct experiment, is part of a relatively new methodology in philosophy that involves gathering and interpreting empirical data. In the five instances in this corpus, the data came in the form of intuitions about philosophical issues and cases. In such articles, researchers construct and present several thought experiments to participants who then share their philosophical intuitions about the cases. These intuitions are then used as evidence to build

arguments. For example, in the segment below, Machery et al. (2017) draws an inference about the "Gettier intuitions" of their participants, that is, intuitions about cases in which a person has a justified, true belief, but would not be said to have knowledge:

> Since participants in all four cultures exhibit Gettier intuitions, we think it is plausible to hypothesize that Gettier intuitions may be a reflection of an underlying innate and universal core folk epistemology (p. 652).

7.2.2.2 Strategies Used to Criticize Alternative Solutions

When making the step *critique solution* (under the move EVALUATE SOLUTION), six strategies were used in 10 or more articles in the corpus. These strategies are summarized below in Table 7.8.

Table 7.8. Strategies to criticize alternative solutions

Strategy	Number of Texts[a]	Percentage of Corpus
Object by counter-example	19	32%
Object by incompleteness	17	28%
Object by interpretation	15	25%
Object by reductio	14	23%
Object by inconsistency	10	17%
Object by invalidity	10	17%

[a]The number is more than 60 because some authors use more than one strategy in their work.

The most common type of criticism levied against other accounts was to present a counter-example (which includes using case studies or thought experiments). Counter-examples can be devastating to arguments since they purport to show that some proposition in the argumentative chain is false. When presenting a case study or thought experiment to provide a counter-example to a position, there can be quite lengthy descriptions of some possible state of affairs, as is the case in the thought experiment below taken from Neta (2019), who presents the case as a counter-example to a position known as *dispositionalism* (which attempts to explain reasons for which we believe or do something):

Suppose that Nyambi has a disposition to believe what he hears reported on CNN, but he is not aware of having this disposition. He does, however, have a fully justified, false belief that he does not have this disposition, and he also has a fully justified false belief that he has a disposition to believe what he hears reported on Al-Jazeera. Suppose furthermore that Nyambi hears the report about Russian forces on CNN, exercises his actual disposition properly (whatever precisely is involved in such proper exercise), and thereby comes to believe that Russian forces have bombed civilian targets in Syria. But when asked why he holds this belief, he offers the completely sincere and justified, but false, reply that he heard it reported on Al-Jazeera. Now let's suppose that Nyambi acquires evidence that shows that CNN is much less trustworthy than Al-Jazeera—in fact, let his new evidence show that the disposition to trust CNN's report is much less proper (again, whatever precisely such propriety involves) than the disposition to trust Al-Jazeera's reports (p. 193).

The second most common critical strategy was to *object by incompleteness*. This objection amounts to criticizing a position because it fails to account for some relevant domain that purportedly should fall under the purview of the theory or argument. For instance, in the segment below, Bourget (2017) criticizes the *inferential theory of grasping* (which attempts to explain what grasping a proposition amounts to):

Perhaps the most obvious difficulty with the inferential theory is that it is hard to see how the inferences that are relevant to grasping a proposition might be specified. As stated above, the theory is not entirely clear regarding the manner in which the extent of one's grasp of P [propositional content] varies with the inferential role of *t* [thought]. The problems start when we try to make the theory a little more precise on this score.

It can be seen that the criticism amounts to this: when we dig down into the theory, we see that it is not able to give us a clear answer about some feature that it should be able to. This differs from presenting a counter-example because the objection is not that there is a case which renders some statement of the theory or argument false; rather, the objection is that an argument lacks the resources to be able to satisfactorily explain some relevant phenomena.

The third strategy is used mostly in the history of philosophy. It involves criticizing some account based on how they have interpreted relevant evidence. In the case of the history of philosophy, the relevant evidence includes the historical works of the author under discussion. For articles on contemporary topics, the evidence sometimes includes sentences (common in the philosophy of language). For example, below, King (2018) criticizes how one author uses a sentence (referred to as "21" in the segment) in support of their theory in the philosophy of

language by offering an alternative semantic interpretation of the sentence (the relevant sentence is "the bathhouse will be cleaned at 10AM").

> Well, a natural thought is that the fact that the campground displayed [in] 21 indicates they took themselves to be informing campers about something likely to be of significance to them. That the inside of the bathhouse is to be cleaned daily at a certain time would have significance for campers, since they could not use the bathhouse at that time. Not so for an exterior scrubbing. Further, the usual way of cleaning a public bathhouse daily is to clean its inside. Thus, having seen 21, it is natural for the campers to expect that a cleaning of the inside of the bathhouse will occur at every 10 AM. But none of that makes 21 false if only the exterior gets cleaned at 10 AM (p. 790).

The fourth strategy, *object by reductio*, criticizes a position based upon some dubious or absurd consequence that is alleged to follow from a view. This strategy was named "reductio" after the argumentative strategy "reductio ad absurdum", although this term only loosely applies, as sometimes reductio ad absurdum is defined quite technically in a different way than I intend to define this strategy.[90] As an example, consider this objection raised by Sripada (2017) against a control-based theory of moral responsibility:

> The problem with taking this tack is that it sets a much too lenient standard for moral responsibility. Consider the unwilling addict. He has precisely the same level of control over whether or not he tries to resist as does the willing addict. Because control appears somewhere in the aetiology of his action, on the current proposal he too would be morally responsible for his drug-directed actions. Since it is almost universally agreed that the unwilling addict is not morally responsible for his drug-directed actions (see note 8), this amounts to a reductio argument against this approach (p. 792).

It can be seen that the strategy involves drawing out an implication of some position and then arguing that this implication must be false. In general, the abstract form of this argument looks like this: P implies Q; but Q is clearly false; therefore, P is false (where "P" and "Q" represent propositions). This strategy is different from *object by counter example* since the proposition Q is not actually a statement made by the theory or account; rather, it is an inferred proposition that the author argues a theory must make based upon its own commitments.

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[90] In a reductio ad absurdum, a proposition is supported (or "proved") by showing that its negation would result in absurd consequences (often a contradiction). For instance, consider this reductio: If God were omnipotent, God could create an object with such mass that God would be unable to lift it. This results in a contradiction (God is both omnipotent and not omnipotent). This thus supports the statement (or "proves", depending on how forceful one feels the reductio to be) that 'God is not omnipotent'. As *object by reductio* is focused on criticism and not supporting some claim, these strategies are not technically the same.

The fifth strategy, *object by inconsistency*, charges that an account results in contradictory propositions in the respect that one proposition accepted by the account entails another that the account mistakenly either accepts or denies. For example, in the segment below, McDonough (2016) charges that one interpretation of Leibniz results in him (i.e., Leibniz) holding inconsistent views about bodies:

> So far so promising, but an obvious difficulty looms: it remains unclear how exactly Leibniz could think that monads might constitute extended bodies while also maintaining that monads are not literally parts of the bodies they constitute (p. 16).

The final strategy, *object by invalidity*, charges that an argument incorrectly infers a conclusion from its premises. This is distinct from *object by counterexample* since the issue is not whether a particular proposition is true or false; rather the focus is on the connection between the propositions. For instance, in the excerpt below, King (2018) argues that one account of the relation between words and references does not necessarily hold:

> The fact that we assign real world references to expressions does not mean we have to assign to all expressions that superficially look the same references of the same type. In particular, the fact that we take names to be type e, and so have individuals as references, does not require us to take 'Joe Sixpack' to be functioning semantically as a name here and so have a referent of type e (p. 782).

These six strategies constituted the majority of those used to carry out the step *critique solution*. While other strategies not discussed above were used as well, such as *object by insufficient evidence*, each appeared in less than 15% of the corpus. These strategies show that philosophers employ a wide-range of tactics to critique and negatively evaluate the works of others.

7.2.3 Conclusions on Moves, Steps, and Strategies in Body Macro-moves

This section analyzed and discussed the most prominent moves, steps, and strategies used to accomplish the three macro-moves that constitute the body of philosophical RAs. It was found that the moves SUMMARIZE and EVALUATE are the predominate rhetorical functions used in the macro-moves. The former involves describing and analyzing arguments and problems while the latter involves critically assessing those arguments and problems. When evaluating arguments, it was found that more emphasis was placed on giving criticism than praise, particularly when examining the works of others. These findings about evaluation may come as no surprise to the philosopher; however, when contextualizing the findings within the broader literature, it further

shows the distinctive nature of philosophical writing. First, while multiple move analysis models of discussion sections of RAs in the social and natural sciences include an evaluation move (Moreno & Swales, 2018; Yang & Allison, 2003), this move is often used to evaluate one's own study, not those of others. Second, many move analysis models of discussion sections also include a move or step that involves comparing one's study to others (Cotos et al., 2015; Kanoksilapatham, 2015; Peacock, 2002). For philosophy RAs, it was found that COMPARE is an uncommon move in the respect that philosophers do not consider other arguments simply to look at similarities and differences in the accounts; rather, other arguments are almost always considered with a critical eye. Finally, it is notable that some of the core moves and steps found in other fields in the results and discussion sections are missing in philosophy. For example, multiple studies include a move known as RECOMMENDATION in the discussion section, in which authors make suggestions for future research (Holmes, 1997; Peacock, 2002). While occasionally philosophers will make such recommendations in the conclusion of their work, this does not appear to occur while they are discussing their central argument. In addition, multiple models include a move or step referred to as LIMITATION (Kanoksilapatham, 2015; Peacock, 2002). This is, in essence, a form of negative evaluation; however, it is a specific strategy used to do so. In philosophy, aside from experimental philosophy RAs, negative evaluations are not typically directed at the methodological approach of the author, although some philosophical conversations are concerned with methodology in general (e.g., whether intuitions should count as evidence).

7.3 Moves and Steps in the Conclusion

Table 7.9 below shows an overview of the moves used in the macro-move CONCLUDE ARGUMENT.[91]

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[91] Systemic moves (e.g., ELABORATE and PREVIEW) are not included in the table. Systemic functions will be discussed in the following section.

Table 7.9. Overview of conclusion section moves

Name	Number of Texts	Percentage	Mean Word Count[a]
CONCLUDE ARGUMENT	56	93%	426
SUMMARIZE ARGUMENT	51	85%	115
ESTABLISH SIGNIFICANCE	45	75%	164
EVALUATE ARGUMENT	19	32%	72
CONSIDER FUTURE RESEARCH DIRECTIONS	5	8%	14

[a]The mean word counts of the moves do not add up to the mean of the macro-move because not all moves were included in this chart. Systemic moves (e.g., ELABORATE) were not included.

It can be seen that there are two conventional and two optional moves: Philosophers typically summarize and discuss the significance of their work in the conclusion; however, they only occasionally evaluate their argument, and they very infrequently discuss future research directions. The first move, SUMMARIZE ARGUMENT, is the most conventional move, appearing in all but 5 texts that make the macro-move CONCLUDE ARGUMENT and occurring in 85% of the corpus overall. This move is simply a restatement of the main points of the article. For some articles, this was the only move made in the conclusion, as is the case for the conclusion below, written by Contessa (2016):

> In this paper, I have argued that both of Thomasson's charges against the fictionalist's objection to easy arguments should be dismissed. I have argued that, properly understood, the fictionalist's objection to 'easy' arguments takes the form of a dilemma — either the premises of 'easy' arguments are not truly uncontroversial or the inferences on which they rely are not truly trivial — and, as such, it does not beg the question against deflationism. Moreover, I argued not only that the fictionalist's interpretation of easy arguments is tenable (contrary to what Thomasson claims) but also that the fictionalist might, in fact, have a better explanation of the seemingly trivial nature of the inferences involved in easy arguments than the explanation offered by the deflationist (p. 772).

The predominance of this move in the conclusion section is consistent with other disciplines. For example, Yang and Allison (2003) found that *summarizing the study* was the most frequent function in conclusion sections in linguistics, and Tessuto (2015) found this move to occur in 91% of a law RA corpus.

The other conventional move, ESTABLISH SIGNIFICANCE, corresponds to what has been referred to as "deductions from the research", although this has been used as a blanket term to include both indications of why the research is significant as well as considerations of future research. It was found that this move was carried out by two steps: The most common step

(occurring in 58% of the corpus) involves drawing and blocking implications about one's argument. The other step involves situating the study within the larger research context (occurring in 45% of the corpus). For example, in the segment below, Schectman (2016) considers how his argument relates to the extant research on Leibniz's concept of infinity:

> This interpretation of Leibniz's notion of infinity is consonant with a now standard picture of him as offering a resolution of Galileo's Paradox consistent with Euclid's Axiom (p. 1142).

It is difficult to judge how this move compares to other fields, since often researchers consider implications of their arguments in the discussion section and not just the conclusion; however, for studies that examined similar functions in the conclusion section (e.g., Tessuto, 2015; Yang & Allison, 2003), it would seem that this move is also conventional for fields such as applied linguistics and law. One difference that can arise, however, is the nature of the implications: The articles in this study did not tend to consider future research implications nor pedagogical implications, while this is more common in other fields. For example, Yang and Allison (2003) found that articles in applied linguistics averaged at least 1 pedagogical implication per conclusion section. Clearly, this is largely attributable to the aims and scope of the journal in which the authors are publishing.

The other moves were only optional. EVALUATE ARGUMENT involves an overall assessment of the author's position. This move was accomplished by two steps, *give positive justification* and *consider potential issues*, which occurred in 16 and 11 articles in the corpus, respectively. Thus, it was more common for philosophers to positively assess their work than to consider ongoing issues when concluding their essay, which is the opposite of what occurs in the body of the work. An example of this positive assessment is given below, in a segment taken from Sripada (2017):

> When we add these arguments together, however, I believe they constitute a convergent and fairly weighty case that, with regard to their respective drug-directed actions, the unwilling addict is not morally responsible for what he does but the willing addict is (p. 812).

Compared to conclusions in other fields, it would seem that philosophers evaluate their study less frequently. Tessuto (2015), for example, found this move to occur in 71% of texts in law. Nonetheless, the implications that can be drawn from this are limited by multiple considerations: (1) Philosophers almost always evaluate their own argument in the body of the

work, and thus whether they do so in the conclusion is not indicative of whether such a move was carried out at all; (2) conclusions and discussion sections are not always clearly demarcated, depending on the field (Swales & Feak, 2012), and thus it is difficult to say whether one should restrict the comparison to only fields that include a section clearly marked "conclusion" or whether the comparison should be included for those where the study is evaluated in the discussion section. It is also important to note that *consider potential issues* does not seem to precisely reflect similar moves and steps variously referred to as "limitations" in other studies. The function *limitations* tends to focus criticism on the methodology used to generate the results, whereas the step *consider potential issues* evaluates the merits of the arguments, usually by considering whether the argument faces insurmountable counter-examples, and whether it is consistent and complete.

The final move, CONSIDER FUTURE RESEARCH DIRECTIONS, involves a discussion of what research might be done to further build upon the current study. For example, in the segment below Enoch (2020) lays out the next problem that he contends needs to be dealt with:

> So this has to be our next task. We have to understand better the value of autonomy as sovereignty, or the constraints that considerations of sovereignty place (for instance, on interference) even when the relevant consent is nonautonomous in other senses. And we need to understand how sovereignty interacts with other relevant values and considerations, and when it may win the day. I hope to embark on that task in my next article (p. 207).

This move was used infrequently, occurring in only 5 texts in the corpus (8%) and being used only 7 times in total (one article used the 3 move three times). Compared to conclusion sections in other fields, this move was used less frequently in philosophy: It was found to be used in 31% of articles in a corpus of law RAs (Tessuto, 2015) and was used 7 times in only 13 articles in applied linguistics (Yang & Allison, 2003). That philosophers make this move less frequently than in other fields and disciplines is also supported by the fact that, while the move does not occur anywhere else in philosophy RAs, it does occur in the discussion sections of RAs in other disciplines. For example, Kanoksilapatham (2005) found the move to occur in 53% of biochemistry RAs, and Cotos et al's (2016) study of 30 disciplines found the function to range from occurring in just under 20% to just over 60% of articles in each sub-corpus, with 18 of 30 sub-corpora having between 30% - 40% of texts utilizing the function (each sub-corpus had 30 articles). This raises the question of why philosophers tend to make this move much more infrequently. Part of the explanation may be related to methodology. Often, future research

directions identify ways in which tweaks and changes to the methodology may yield different and interesting results (e.g., changing the sample size; changing the target representations of the sample; applying a different data analysis approach; etc.) In fact, 1 of the 5 texts in the philosophy corpus that did discuss future research directions used an experimental philosophy methodology, and this move was used to discuss ways in which the instrument for collecting data could be modified to generate different results. However, since philosophy RAs do not typically explicate a methodology, it is not as easy to consider ways in which future RAs might modify the way in which an argument is approached and constructed. Another possible explanation involves the dialectical nature of philosophical argumentation: Typically, philosophy RAs critically evaluate alternative positions in addition to advancing their own view. Perhaps it is to be expected that future research will criticize and attempt to offer better explanations for philosophical puzzles, and it would seem strange both (1) if an author had ideas for how one might criticize their work but did not disclose it in the article and (2) if an author had other potentially good explanations for the philosophical problem in mind but did not pursue them in the article. In contrast, empirical research in the social and nature sciences could be framed as a process of adding to our collective knowledge about a domain and addressing gaps in knowledge (a step used in introductions that philosophers also seldom make) rather than being a dialectical process. Proposing future research directions seems more fitting for this type of research process.

7.4 Conclusions

This move and step analysis of philosophical writing has revealed several key findings. First, in the introduction, the only obligatory move was to state the plan for the essay, which was also the introductory move that philosophers tended to spend the most rhetorical energy on (in terms of word count). This suggests that philosophers find it essential to provide their readers with a preview of the argument they will make. This move is important because philosophy RAs do not have conventional macro-functions that appear in specific places in the text; thus, philosophers provide readers with road maps to help orient them and give them direction for the remainder of the essay. Second, in the body of the RAs, it was found that two key functions are most relied upon: summarizing and evaluating. The latter function is particularly noteworthy since it is both highly conventional and occupies a considerable amount of rhetorical space in regard to discussing alternative solutions and advancing one's own argument. In addition, it was found that negative

evaluations tend to receive greater focus than positive ones. These negative evaluations are typically composed of sequences of criticisms and responses. In a certain respect, these sequences in the microcosm of a philosophy RA represent the macrocosm of philosophical writing. That is, when considering not just a single article, but the body of philosophical works, one can see a dialectic process in which arguments are put forth to problems, which are then criticized, resulting in responses being offered, which are then criticized themselves. This leads to the development of new ways of understanding the problem, and new solutions are then offered. The dialectic then goes on. Third, when concluding their works, philosophers tend to summarize their arguments and consider broader implications in their area of study. Thus, in a certain respect, philosophers end where they started by providing their readers with an overview of their argument.

Compared with other fields and disciplines, particularly those that use the IMRD format, this study found philosophical writing to be highly distinctive. Philosophers did not tend to establish niches by drawing attention to research gaps nor was it highly conventional to spend time summarizing and synthesizing related research in the introduction, although philosophers did tend to outline and summarize their arguments at length in the introduction. Furthermore, they spent a considerable amount of time critiquing and considering critiques to their arguments, while they seldomly simply compared their own arguments with those of others. Finally, they did not tend to consider future research directions nor did they consider limitations of their work when evaluating their study. The explanation for these differences is surely multifaceted and depends on the confluence of many factors ranging from social-historical conventions to systemic functional relations among macro-moves, moves, and steps. That said, one explanatory source particularly stands out: The natural and social sciences are largely concerned with addressing questions and problems that can be answered by appealing to empirical research. Thus, the methodology for generating and analyzing research plays a quintessential role in the RA. The importance of the methodology to the argument of the RA can be seen in criticisms levied against it: if one wishes to critique an empirical study, a sure place to attack is the methodology. On the other hand, while the topics in philosophy are certainly not non-empirical, the matters they address are not issues that can be solved by generating empirical research (save for experimental philosophy). As a consequence, philosophers do not construct methodologies that systematize and formalize observations of empirical phenomena, and thus in their writings there are no descriptions of this machinery that is used to generate conclusions for arguments. In contrast, philosophers use implicit

strategies when constructing arguments, strategies which tend to focus on conceptual and logical relations. For example, they construct arguments using strategies like theory building and conceptual analysis. These do not rely on formally explicated methodologies. It would seem that as a consequence of this, philosophers use distinctive rhetorical moves. For example, because there is no methodology section, the articles are not organized in an IMRD format, and with the flexibility that this affords authors in constructing their arguments, it requires that they communicate this structure in advance in the introduction. Furthermore, when criticizing their own position, this is not put forth as limitations directed at a methodology because no such methodology was explicated. Finally, this may also shape engagement with surrounding literature, for instead of focusing on comparisons of what others have found using a similar approach, the focus is more upon particular stances taken towards solving problems.

This move analysis of philosophical writing had several limitations, which can be addressed in future research. First, more focus should be spent on clearly distinguishing the functions of *summarizing*, *explaining*, and *drawing inferences*. One way of doing this may be to use the argument the author identifies in the introduction as being the core argument, and then considering any additional content built on top of the summary of this core as commentary of some sort (e.g., an explanation or an implication). It might also be interesting to distinguish between *justifying* and *explaining*, which was discussed in Chapter 7. Another limitation was that, in the introduction, the first two moves were not always clearly demarcated (ESTABLISH THE TERRITORY and ESTABLISH THE NICHE). In a certain respect, this may be because establishing a niche seems to be more of a perlocutionary function in writing: The author is aiming to convince audiences that some topic is worth pursuing. On the other hand, building the territory seems to reflect more of an illocutionary aspect: It involves making generalizations, summarizing research, etc. As was noted in Chapter 3 of this dissertation, these functions are always coupled with one another and cannot be considered separately. Thus, it may be that this distinction between moves is somewhat artificial. A more precise model might simply break a single move (e.g., ESTABLISH RESEARCH AREA) into several steps, all of which have the larger illocutionary aim of describing the research area and the perlocutionary aim of convincing audiences that this research area is worth pursuing. A final limitation is that the moves and steps in the body of philosophy RAs were primarily identified and discussed in terms of their illocutionary force (e.g., *summarize*, *compare*, *evaluate*, *explain*, etc.). Future research might place more emphasis upon the perlocutionary aims of these functions.

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CHAPTER 8 : SYSTEMIC FUNCTIONS

This chapter analyzes key systemic functions used in philosophy. The chapter focuses in particular on the use of footnotes, case studies, generalized statements, outlines, block quotes, qualifications, and visuals. The chapter also carries out a linguistic analysis of several of these functions. The chapter begins by first recapping what systemic functions are and how they are distinct from moves and steps.

8.1 Overview of Systemic Functions

As was discussed in Chapter 5, a functional analysis of discourse can be conceptualized as a part-whole analysis in the respect that discourse is broken down into sub-functions that help advance more overarching functions. Nonetheless, these *parts* of discourse can be conceptualized in two distinct ways: as segmental and as systemic parts (Croft & Cruse, 2004). The former are parts that have clear spatial boundaries and are confined to a particular area of the text. Most of the moves and steps reviewed in the previous chapters can be considered segmental parts since the functions occur in well-defined and discrete textual spaces. On the other hand, systemic parts permeate a text and are not confined to a particular area or section of the text. For example, as we shall see, functions such as *previewing* and *reviewing* can occur in any macro-move in the body of the text and are thus not confined to a discrete textual region. These systemic functions are the focus of this chapter.

This research study identified numerous systemic functions. Many of these were identified as belonging to an overarching category named ELABORATE. ELABORATE[92] involves making additional remarks and comments on a move or step, and it includes functions such as *give example, identify assumption*, *discuss visual*, *use block quotation*, *make linguistic clarification*, *note point of interest*, and *qualify*. In addition, the overarching category FOOTNOTES is similar to ELABORATE, as many of the functions are identical to those identified above and serve the purpose of adding additional content to a function. In contrast, however, FOOTNOTES also include functions involved with making citations. The other key systemic functions identified in this work were *use case study*, *outline argument*, *use standard form*, and *make generalized statement*. This chapter will first

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[92] I will use all-caps for over-arching categories of systemic functions and italics for sub-functions.

analyze the overarching category FOOTNOTES and will describe the most frequent sub-functions of this category. Next, the chapter will focus on and analyze 7 key systemic functions: *use case study*, *outline argument*, *use standard form*, *make generalized statement*, *qualify*, and *use block quotation*. These systematic functions were either among the most frequently used, or they stood out as something highly distinctive in philosophical writing. For several of these functions, a linguistic analysis will also be provided.

8.2 Footnotes

FOOTNOTES [93] represent an important over-arching category of systemic functions in philosophy. Every RA used footnotes, with an average number of 39 per article, an average total length of 2,576 words, and an average text coverage of 19%.[94] This shows that a considerable amount of textual space is dedicated to this function. Table 8.1 shows an overview of FOOTNOTES as a category as well as a breakdown of the most commonly used functional types of FOOTNOTES.

Table 8.1. Systemic Functions grouped under FOOTNOTES

Name of function	Number of Files	Percentage[a]	Total Number of Notes	Average per text
FOOTNOTES	60	100%	2335	39
Qualify	57	95%	268	4.5
See also reference	56	93%	403	6.7
Provide background	55	91%	495	8.3
Cite to elaborate	53	88%	296	4.9
Note about language	45	75%	98	1.6
Acknowledge another work	37	62%	113	1.9

[a]The percent of texts in the corpus that contained at least one footnote of this type of function.

The table shows the 6 most frequent and widely dispersed types of footnotes. *Qualify* had the largest dispersion, occurring at least once in 95% of the corpus. Because this function was also

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[93] I use the term "footnotes" loosely here to mean both footnotes and endnotes. In most cases, journals used footnotes proper, but sometimes the online versions of the articles would have endnotes (since there is only one 'page' of text when viewed on a web-browser).

[94] Text coverage is calculated by taking the total number of characters in the coded function and dividing it by the total number of characters in the text.

used in the body of the text, it will be dealt with more comprehensively in the next section. The most frequently used footnote was *provide background*, occurring on average over 8 times per text. This function involves adding details that digress from the main point being made. It is often used to help fill in important context that the reader may be missing or may find of interest. For example, in the segment below, Sripada (2017) offers additional information about a theory of moral responsibility in order to avoid possible confusion.

> Fischer's theory has a number of other conditions for moral responsibility, including a knowledge requirement, historical requirement, etc. But these conditions are in addition to the requirement of actional control, understood in terms of reasons-responsiveness of the mechanism that issues in action. They don't substitute for the requirement of actional control. See note 7 (p. 794).

Because all of the journals examined in this study were generalist journals, in the sense that they were not restricted to a particular domain of philosophical investigations (e.g., ethics or metaphysics), it would be interesting to see whether this type of function is as common in specialist journals, for in those cases, authors may not deem it as necessary to provide elaborate background information.

A similar type of function is carried out by *see also reference*; however, in this case, the writer points the reader to another text(s) that will provide them with important context, most often using the phrase "see also" followed by the reference(s). This function is distinct from a reference in which the writer indicates where the content or support for some statement in the text came from since the function *see also reference* points the reader to a text that will provide them with additional information about the content being discussed. In some cases, the writer suggests a considerable number of texts, as Heathwood (2019) does below:

> For idealized theories, see Sidgwick 1907: 109–111; Rawls 1971: 92–93, 417; and Brandt 1979: 268, 113. For global desire theories see Parfit 1984: 495–498 and Carson 2000: 94. For self-regarding desire theories, see Dworkin 1977: 234; Overvold 1980: 10n; and the "Success Theory" throughout Parfit 1984. For second-order desire theories, see Railton 1986: 17; Hyde 2011; and perhaps Raibley 2010. For restrictions to non-moral or non-altruistic desires see Sidgwick 1907: 109; Brandt 1979: 247; and Baber 2007: 107. For a restriction to now-for-now desires, see Hare 1981: 101–106. For a restriction to autonomous desires, see Haji 2009. (p. 682).

This raises the question of what the perlocutionary aim of such a function is: What does the writer hope to achieve by suggesting that the reader confer with these other texts, particularly

when they list several, as Heathwood does. On one hand, and most straightforwardly, this would seem to aim to help the reader locate relevant information with ease in case they are curious about learning more details. On the other hand, because it seems likely that readers will seldom consult such texts in their entirety, this may function as a way of bolstering the writers' ethos by convincing the reader either that the author is knowledgeable in this domain or that some statement made by the author is to be trusted (based on their expansive knowledge of the literature).

In addition to *see also reference*, two other types of citations were common in footnotes: *cite to elaborate* and *acknowledge another work*. The former involves making reference to another text and then discussing the content of that text. This is similar to a *see also reference*, but in this function, the author actually discusses the relevant content of the reference instead of just pointing the reader to the text(s). Again, this is not a straightforward citation in that the author is not referencing another text to indicate that material in the body of the text is being paraphrased; rather, the footnote functions as a way of elaborating on some point made in the body of the text by making reference to another author, as Thorpe (2018) does in the note below:

> Brueckner (2010, pp. 280-305) argues convincingly that the prospects for a plausible version of the closure principle that does not support (C1) are dim. Someone who wanted to halt the sceptic here would probably have to give up on the closure principle altogether; see for example Dretske (1992) and Nozick (1981). But most people do not find this option attractive, and if the response to closure scepticism that I discuss in this paper is correct there is no need to take it (p. 671).

In this case, Thorpe cites Brueckner to add elaboration and support to a principle he discusses in his article.

The other type of citation, *acknowledge another work*, makes reference to another author in order to give recognition or credit to the work. For example, Di Bello (2019) uses this function several times to pay homage to those who were pioneers in formulating certain scenarios and cases:

> This scenario was first discussed by Nesson (1979). For similar cases, see Redmayne (2008) (p. 1045).

> The first to have formulated such cases is Cohen (1977); see also Thomson (1986), Wright (1988) (p. 1048).

> The scenario was first formulated by Cohen (1977) (p. 1077).

Similar to the function *see also reference*, part of the perlocutionary aim here may be to build the writer's ethos by making it clear to the audience that they have extensive knowledge of this philosophical terrain.

The final function listed in table 8.1 is *note about language use*. This function is most often used to clarify what is meant by some term or phrase, as Rowland (2017) does below:

> It will also be helpful to clarify what I mean by 'some possible agent'. By 'some possible agent' I mean a possible agent other than the trivially logically possible agent who has access to p in virtue of the fact that p (p. 825).

Such notes allow authors to block potentially unwanted interpretations of their arguments, which often lead to objections that must be addressed.

It can be seen that footnotes play several nuanced roles within philosophical writing, particularly when it comes to making reference to other works. These references are often not straightforward citations that indicate the source of a particular claim or argument; rather, the references allow authors to point readers to relevant texts, to expand upon the content in the body of the work, and to pay homage to other authors.

8.3 Seven Key Systemic Functions

8.3.1 Overview of Functions

This section will focus on seven important and notable systemic functions identified in philosophical writing. An overview of these functions is provided in table 8.2 below:

Table 8.2. Key systemic functions in philosophical writing

Name of Function	Number of Texts	Percentage[a]	Coverage[b]	Average Word Count
Qualify	60	100%	8.5%	1134
Outline	59	98%	3.5%	452
Block Quote	42	70%	3.0%	347
Use Case Study	29	48%	6.5%	915
Make Generalized Statement	28	47%	0.7%	101
Discuss Visual	15	25%	0.3%	42
Use Standard Form	14	23%	0.3%	46

a The percentage of texts in the corpus that contain at least one instance of the function.
b Text coverage is calculated by taking the total number of characters in the coded function and dividing it by the total number of characters in the text.

The first four functions in the table are notable due to their high level of dispersion across texts in the corpus as well as the amount of textual space that they occupy, while the last three are more notable because they are either highly idiosyncratic to philosophical writing or because their dispersion and coverage in the corpus is less than one might anticipate. In what follows, a detailed analysis of each of these functions will be given. In addition, for three of the functions—*qualify, outline*, and *use case study*—a linguistic analysis will be given.

8.3.2 Qualify

The systemic function *qualify* was the most widely dispersed, being used in every text in the corpus. It also occupied a considerable amount of textual space, covering 8.5% on average and having a mean word count of 1,134. This function involves either (a) restricting the meaning of a proposition and making it more precise, often by adding caveats and provisos to what has been said, or (b) blocking possible implications and worries that might arise from the argument being advanced. In a certain sense, these functions have the same effect, for blocking implications also restricts the possible scope of meaning; however, they are distinct in that sometimes the possible meanings in the broader context are pruned rather than meanings strictly involved with some statement. Admittedly, it is not always clear to which category a qualification belongs. The segments below, taken from Climenhaga (2018), Dorsey (2019), and García-Carpintero (2020), respectively, show examples of qualifications.

I do not mean to claim that philosophers explicitly think through all of this when offering and responding to error theories. I am rather offering a formal reconstruction of their tacit epistemic practices in such situations (Climenhaga, 2018, p. 86).

Of course, it's perfectly possible that some, even many, individuals will fail to develop a past-directed reactive attitude in this way. But this doesn't entail that the near-term bias is rational in cases in which a person doesn't actually develop the past-directed reactive attitudes (Dorsey, 2019, p. 471).

For our present purposes we need not worry whether the relevant meanings should count as "semantic" (a feature of the lexical meaning of the expression) or rather "pragmatic" (a creative meaning that speakers manage to endow their utterances with, trading on the rationality of their audiences) (García-Carpintero, 2020, p. 9).

The first example restricts the meaning of a particular proposition: the author clarifies what the claim they are making amounts to. In the second example, the author considers a set of cases that would seem to be at odds with a view that they are criticizing (that it is rational to show a bias for near-term benefits); however, they then block this potential interpretation, noting that the view they are advancing is perfectly consistent with such cases. Thus, the qualification serves as an *even if* proviso to the discourse, that is, even if condition [x] holds, the author's position is still valid. In the final case, the author restricts the meaning of the larger discourse by noting that, regardless of whether the final linguistic analysis of some aspect of a sentence results in a pragmatic or semantic understanding, it does not impact the view being advanced by the author.

Clearly, *qualify* plays an important role in philosophical discourse given how often it is used. But what makes this function so important? The explanation would seem to be that philosophers focus a large amount of energy on making their arguments precise. To use a horticulturist analogy, often philosophical discourse can grow unruly since the propositions and arguments being made can be vague, ambiguous, and can have numerous possible implications and entailments. In order to keep the discourse focused and on point, philosophers use qualifications to prune the meaning potential of their work and to help readers better grasp what is being gotten at. This raises the question of whether RAs in the natural and social sciences similarly use qualifications since they likewise need to focus and refine the meaning-potential of their work. While I am unaware of research that has examined this specific linguistic function in other fields and disciplines, it seems likely that RAs using the conventional IMRD format may have less need of qualifications than philosophers. This is because the methods section will typically

operationalize terms and make the meaning of the results highly precise. In a certain sense, the pruning is done early on in the discourse, and then in the discussion section, authors expand the meaning of their work by explaining results, comparing results, evaluating results, etc. In philosophy, in contrast, this pruning is often done on-the-fly when it becomes relevant to the discourse. To be clear, it is the case that philosophers will sometimes define key terms early on in the discourse; however, this is not a conventionalized procedure as it is in the methods section.

Turning now to a linguistic analysis of *qualify*, two linguistic features are analyzed below: (1) discourse phrases and markers used at the beginning of sentences that help to indicate a qualification will be made and (2) the use of modals. Table 8.3 below shows the most frequent relevant[95] discourse phrases and markers used at the beginning of sentences in qualifications.

Table 8.3. Discourse markers and phrases used at the beginning of sentences in qualifications

Discourse marker/phrase	Instances	Percentage of Qualifications[a]
1-Word		
But[b]	162	17.8%
However	71	7.8%
Perhaps	29	3.2%
Although	25	2.8%
Here	18	2.0%
Rather	14	1.5%
While	14	1.5%
Nevertheless	12	1.3%
Still	10	1.1%
Admittedly	10	1.1%
Given	9	1.0%
Before	9	1.0%
Notice	5	0.6%
Nonetheless	4	0.4%

[95] By "relevant", I mean discourse markers and phrases that play an important role in making it clear that the text section functions as a qualifier. In this analysis, I ignore markers and phrases that bear no relevance on indicating that the segment functions as a qualifier. For example, "in the morally relevant" was a 4-word phrase found to occur somewhat frequently in the corpus at the beginning of sentences; however, this sequence appears to be content-driven and does not indicate or suggest that the segment is a qualification.

Table 8.3 continued

2-Word

Of course	82	9.0%
Even if	13	1.4%
Note that	10	1.1%
But even	9	1.0%
Strictly speaking	7	0.8%
At least	7	0.8%
Insofar as	5	0.6%
By contrast	5	0.6%
After all	3	0.3%
Despite this	2	0.2%

3-Word

To be [clear/precise/sure][c]	19	2.1%
It [may/might] be	10	1.1%
For [our/present] purposes	6	0.7%
It would be	5	0.6%
It should be	5	0.6%
In any case	5	0.6%
On the contrary	4	0.4%

4-Word

On the other hand	6	0.7%
As far as I	6	0.7%
At the very least	3	0.3%

[a]There were a total of 908 qualifications made in the corpus. The percentage of qualifications that use the word/phrase is calculated as [n]/908.

[b]For individual words that also occur in longer phrases (e.g., "**but**" and "**but** even"), single instances of the word are not double counted if they were used in a phrase. For example, an instance of "but even" does not also count as an instance of "but".

[c]Since the meanings of "clear", "precise", and "sure" are roughly the same in this context, the instances of each of these separate phrases was summed together.

It can be seen that several common discourse markers dominate the way philosophers make qualifications, e.g., "but", "however", and "nevertheless".[96] Still, there are several less common discourse markers and phrases that seem to play a more unique role in making apparent to readers that a qualification is being made. The use of "here" at the beginning of sentences is one such interesting case. "Here" often co-occurs with making qualifications, as, for example, in this sentence taken from Cohen (2020), where she blocks certain implications of her position concerning Kant's theory of emotion:

> **Here**, I am only concerned with our affective relationship to the world (p. 444).

Thus, "here" seems to function as a way of getting the audience to focus strictly on what is being said by the author, which can then allow the author to more easily qualify their view. Another phrase closely connected with qualifying is "to be clear/precise/sure", which helps to make it clear to audiences that the discourse will be tidied up and made more precise, as Sripada (2017) does in the following example when framing the focus for the broader discourse:

> **To be clear,** the issue **here** is whether both agents are morally responsible for their respective actions (p. 804).

Finally, perhaps the most notable phrase that co-occurs with qualifying was "of course", which occurred in 9% of qualifications. "Of course" most commonly functions as a qualifier by acknowledging that, even though one proposition may hold with respect to the author's view, it does not carry certain implications (which are blocked by the author). For example, Lackey (2020) qualifies a point being made about epistemic duties:

> **Of course**, these obligations are often, in whole or in part, moral in nature, but this need not always be the case (p. 38).

Another interesting linguistic feature of qualifications was their strong correlation with modals, which can be seen below in Table 8.4.

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[96]It should be noted that not every instance of these phrases and discourse markers serves as a trigger for a qualification since sometimes an instance of this function can run several sentences. In these cases, words like "but" and "however" may indicate some kind of contrast with a previous point, but it may not necessarily indicate the writer is making a qualification.

Table 8.4. Frequencies of modals within the function *qualify*

Modal	Instances	Frequency (per 1,000 words)[a]
Can	275	4.0
Would	224	3.3
May	179	2.6
Might	147	2.2
Should	116	1.8
Could	90	1.3

[a]The frequency that the modal occurs per 1,000 words within the function *qualify*. The total number of words for all qualifications in the corpus equals 68,028. This frequency is calculated by dividing the instances of the modal by the total number of words and multiplying by 1,000.

Why do modals so commonly co-occur with qualifications? One possibility is that qualifications often block *possible* implications or entailments of a view. Communication about possibilities is often accomplished through the use of modals, for example, "one **could** argue", "it **might** be thought", "there **may** be cases", etc. In addition, conditional claims, which are also connected to possibility, are often carried out by the use of modals, such as "would". For example, in the segment below, Di Bello (2019) qualifies an aspect of an argument he has made:

> This argument, however, does not imply that innocent defendants **can** complain because the error risk is greater than zero. Such a complaint **would** be unreasonable (p. 1067).

In general, modals have been found to be a common occurrence in philosophical writing (Gray, 2011); thus, to more comprehensively examine this aspect of philosophical writing, it would be necessary to consider more broadly the rate at which modals occur in philosophical works as well as other disciplines.

8.3.3 Outline

The function *outline* was highly conventional, occurring in 59 out of 60 texts in the corpus and occupying on average 3.5% of the textual space. This function involves zooming out of the details of the argument and situating how either the upcoming or previous content fits into the bigger picture. In a certain respect, then, the function helps to frame where the author is in the argument. It was found that this function is carried out by four sub-functions, summarized below in Table 8.5.

Table 8.5. Sub-functions of *outline*

Name of function	Number of Files	Percentage[a]	Mean Word Count
Outline	59	98%	452
Preview	58	97%	216
Review	55	92%	179
Frame	31	52%	49
Raise Question	14	23%	8

The two most common sub-functions of *outline* are *preview* and *review*, which make up a majority of the cases. These functions are opposites to one another: *Review* looks backwards and retraces the outline of the argument while *preview* looks forward and outlines the upcoming discourse. It can be seen that both of these functions are highly conventional, and they are often used one after the other, as Hübner (2020) does in the segment below:

> This is my non-standard reading of Spinoza's barrier in a nutshell. What I want to offer in the remainder of the paper is some reasons to subscribe to this reading. I hope to show that this non-standard account 1) is better grounded textually, 2) allows Spinoza to have a more consistent theory of ideas, 3) better meets his demand for universal intelligibility, and, finally, 4) is philosophically more compelling as an account of thought insofar as thought is, plausibly, essentially intentional (p. 12).

It can be seen the author first offers a brief recap of the discourse before previewing what will come in the next section.

The next sub-function, *frame*, also plays an orienting role for the discourse; however, unlike *preview* and *review* it does not look back or forward in the discourse. Rather, *frame* zooms out of the discourse in order to raise the next topic of discussion. For example, in the passage below, Maguire (2018) frames the next topic:

> Let me end with a diagnosis for our inclination to assume that there is something important about overall affective attitudes to complex states of affairs (p. 802).

While *frame* is clearly similar to *preview* in that it speaks to the upcoming content in the discourse, these functions were distinguished because *preview* is more specific in that it outlines particular discourse moves or content that will come up in the discourse while *frame* simply announces the upcoming focus.

The final function, *raise question*, could perhaps be considered a sub-category of *frame* since it functions in the same manner: it establishes the next topic of discussion. The difference, as might be predicted, is that *raise question* accomplishes this topic shift by explicitly stating a question.

Turning to the language used to carry out these functions, Tables 8.6 and 8.7 below show some of the most relevant n-grams[97] for *review* and *preview*, respectively.

Table 8.6. Frequent n-grams used to *review*

N-gram	Instances	Percentage of *review*[a]
I [we] [have/'ve] argued[b]	21	10.4%
I [have/'ve] [already/also] showed [shown]	16	7.9%
I [have/'ve] suggested	14	6.9%
we [have/'ve] saw [seen]	11	5.4%
the previous section	8	4.0%
in this section	5	2.5%

[a]There were a total of 202 instances of this function in the corpus.
[b]The brackets indicate that the word was also used to identify instances of the phrase. Contractions were also included in the results.

It can be seen that the first four types of phrases all involve using first person pronouns, suggesting that this is a helpful indicator that the author will utilize this function. In addition, the perfect aspect is commonly used. Indeed, in cases where it is optional whether the author uses the perfect aspect or simple past, the perfect is often preferred. For example, "I have/I've shown" was used 13 times while "I showed" was only used 3; "I have/I've suggested" was used 10 times while "I suggested" only 4; and "I have/I've argued" was used 12 times while "I argued" only 9. Without more context, the perfect aspect may seem more natural, raising the question of why the simple past is used at all. In many of these cases, this is because the simple past follows phrases that pick out a particular part of the work, e.g., "In section [x], I argued…". Finally, it is interesting to note that the verb SUGGEST was frequently used. Compared to the verb ARGUE, this seems more hedged, perhaps softening the force with which an author recaps the argument they have made.

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[97] As a reminder, n-grams are contiguous sequences of words that form a phrase (Greaves & Warren, 2010).

Table 8.7. Frequent n-grams used to *preview*

N-gram	Instances	Percentage of *preview*[a]
this [the next] section	96	28.0%
I will argue	25	7.3%
I will now	12	3.5%
I [we] will show	12	3.5%
I want to	11	3.2%
In what follows	11	3.2%

[a]There were a total of 343 instances of this function in the corpus.

Table 8.7 shows many similar features to Table 8.6, such as the use of the lexemes ARGUE, SHOW, and SECTION as well as the use of first-person pronouns. Perhaps of greatest note is that in 28% of cases, author use the signal phrase "this section" or "the next section". This suggests that these constructions are highly conventional and thus aid in helping readers quickly identify the functional role of this part of the discourse.

8.3.4 Block Quote

Block quotes were conventional in philosophical writing, occurring in 70% ($n = 42$) of the corpus and occupying on average 3% of the textual space. This function did, however, show variation across the three areas of research. While the (a) metaphysics, mind, and epistemology and (b) ethics sub-corpora had a similar number of texts make use of block quotes ($n = 12$ and $n = 11$, respectively), the history of philosophy sub-corpus saw a much higher number ($n = 19$, or 95% of the texts). This is explainable by the fact that in the history of philosophy, one of the predominate argumentative strategies involves offering an interpretation of a historical work. To make their exegeses more compelling, philosophers often include lengthy block quotes from the original passages being interpreted.

For the other sub-corpora, block quotes are used in place of summarizing arguments made by others. This can occur in each of the three macro-moves, for sometimes (a) block quotes are used to frame a problem, (b) other times they are used to summarize an alternative solution to a problem, and (c) sometimes they are used to offer an objection to the author's position. In any case, block quotes can lend additional force to one's summary since the audience is given access to text in its original form.

8.3.5 Use Case Study

While less than half of the articles in the corpus (*n* = 29) used case studies, this function occupied on average 6.5% of the textual space, with an average word count of 915, suggesting that when cases are used, they receive a considerable amount of attention from the author. As explained in Chapter 7, case studies involve the use of a specific, well-developed example to illicit intuitions, which are then used as evidence in favor of or against broader philosophical positions and theories. Case studies are usually hypothetical (hence their frequent designation as "thought experiments"), and authors will often make their descriptions of the case stand-out in the written work (similar to how block quotes are offset from the surrounding text). In addition to spending a notable amount of time describing the case, writers also take time to draw the reader's attention to (a) salient intuitions that they might have, (b) explanations and justifications for those intuitions, and (c) inferences about those intuitions. For example, in the two paragraphs below, Koltonski (2016) first describes a case, referred to as "promised help", and then offers extended commentary on the case:

> *Promised Help*: One weekend, Subrena's acquaintance Neelam calls her. Neelam is auditioning that week for the role of Blanche DuBois in a production of *A Streetcar Named Desire*, a role that could be her big break. Earlier that week, Subrena had run into Neelam. During their conversation then about Neelam's upcoming audition and her hopes for a career in the theater, Neelam had expressed her worry that, because most of her friends were also auditioning for parts, no one would be able to give her any last minute help preparing for the audition: "I hope I'll be ready by then because I don't think anyone will be around." Responding to Neelam's concern, Subrena had promised her that she would help her rehearse her lines this weekend if she needed it. Now it's the weekend. Neelam says, "I know you'd probably rather do something else with your weekend than help me rehearse, but my friends are all busy preparing for their auditions. I really need your help." It seems to Subrena, however, from other things Neelam had said, that Neelam does not really need her help—she's been preparing for weeks and she has both the lines and the character down cold—and Subrena can imagine that, were she to help her, the extra practice would be counterproductive by making Neelam overprepared. Still, Neelam thinks that she needs Subrena and that Subrena, because of her promise, should help her.
>
> In this case, it's clear that Subrena ought to help Neelam rehearse her lines, even though she thinks that Neelam doesn't need her help, because she promised that she would. Indeed, one might think, that's just what promises do: they commit the promisor to certain courses of action. But that's not quite what Subrena's promise has done. Strictly speaking, it doesn't commit Subrena to helping Neelam; rather, it commits Subrena to acting on Neelam's judgment of whether she needs her help. If Neelam decides that she needs Subrena's help, Subrena must help her whether or not she agrees with that judgment; and, if Neelam decides that she doesn't need it,

and so Subrena doesn't help her, Subrena can still count as having kept her promise so long as she stood ready to help. Thus, the duty Subrena has created is a duty to defer to Neelam's judgment about whether she is to help her (p. 482-483).

It can be seen that, after describing this detailed case, Koltonski first draws the reader's attention to the salient intuition at play in the case (that Subrena ought to help Neelam). The author then offers an extended explanation of why, precisely, this is the case, and ends the commentary by drawing an inference about that explanation.

Like with block quotes, case studies can be used in each of the macro-moves: They are used to make clear philosophical problems, to construct objections to the views of others, and to provide evidence for one's own view. Also like with block quotes, case studies are not used evenly across the sub-corpora: They were seldomly used in the history of philosophy sub-corpus ($n = 2$ or 10% of articles), but they were used in just over 50% of the metaphysics, epistemology, mind sub-corpus ($n = 11$) and in 80% of the ethics sub-corpus ($n = 16$). This suggests that case studies are particularly important functions when writing on ethics. The explanation for this is likely that topics in ethics often need highly detailed and nuanced cases to test and justify philosophical positions. For example, in the case above, the author aims to make a philosophical point about deferring one's judgement to others. The case helps to bring this type of ethical situation into focus.

Linguistically, case studies are distinctive in their use of everyday rather than technical language, which can be seen in the example above from Koltonski (2016) as well as the two cases below, taken from Climenhaga (2018):

> Low Flight: Stewart is in the Atlanta airport, waiting to board his flight. A fellow traveller seated nearby looks up from his laptop, stretches, turns to Stewart and says, 'I've been traveling all day and it'll be a relief to get home to Detroit. A layover would be annoying. Say, do you happen to know whether this is a direct flight to Detroit?' With his itinerary in hand, Stewart answers, 'Yes, I do — it's direct to Detroit'.

> High Flight: Stewart is in the Atlanta airport, waiting to board his flight. Suddenly a man dressed in a uniform and carrying a small hardshell cooler rushes down the concourse, stops in front of Stewart's gate and breathlessly says to Stewart, 'I'm an organ courier transporting a kidney to a patient in Detroit. I need a direct flight to Detroit, or the kidney will spoil. Do you know whether this is a direct flight to Detroit?' With his itinerary in hand, Stewart answers, 'Sorry, I don't know [whether it is]. You should check with an airline official'.

It is also of note that case studies are often conveyed using syntactic structures that one would expect to find in a genre such as the novel rather than a technical academic work.

8.3.6 Make Generalized Statement

The function *make generalized statement* involves formulating a proposition that makes a generalization about some domain. This function is stands out in philosophy for two reasons. (1) It is often made salient in the text either by the proposition having some kind of index marker that is used to refer to it at later points (similar to how case studies are given names) or by the statement being offset from the surrounding text, similar to block quotes. (2) These statements often include the use of variables that serve as placeholders to make the statement universal for some domain of entities associated with the variable. Three examples of these statements are given below:

> (1) If φ-ing has a moral status, then the moral status of φ-ing is accessible to some possible agent (Rowland, 2017, p. 803).

> (KA) S knows that p in c only if she can rationally act as if p in c (Roeber, 2018, p. 173).

> RP1: A real predicate is a concept, P, whose combination with another concept, S, in a subject-predicate judgment, S is P, could serve to "perfect" S's object in the sense of representing that object as possessing more reality than S already represents it as possessing (Proops, 2015, p. 9).

It can be seen in each of these examples the statement is given an indexed label ("1", "KA", and "RP1"), which is used to refer to the statement later in the text. In addition, each statement makes a type of generalized or universal claim that holds over some domain. For example, in the first generalized statement, "φ" refers to the domain of actions.[98] Thus, a paraphrased version of this statement would read, "for all actions, if an action has moral status, then the moral status of the action is accessible to some possible agent."

These generalized statements play an important role in philosophy since they are often used to string together arguments to arrive at general conclusions. For example, Rowland (2017) and Roeber (2018) each make use of more than 10 of these statements. In each case, the statements are the subject of much commentary: The authors scrutinize and evaluate the statements, sometimes

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[98] In the other examples, the placeholders mean the following: Example 2 - "S" = a subject (or an agent); "p" = a proposition; "c" = a context. Example 3 – "P" = a predicate; "S" = a subject (of a sentence).

finding them well-formulated while other times finding them to be wanting. In addition, the statements provide a useful framework for discussion since they aid attempts to find counter-examples. For instance, in the first example from Rowland (2017), all an author needs to do to refute the generalized statement is to find a specific instance of an action that can be substituted in for φ that will render the statement false.

Like with other systemic functions reviewed above, *make generalized statement* also showed variation across the 3 sub-corpora: Only 6 out of 20 (30%) articles in the history of philosophy sub-corpus made use of this function, while 10 out of 20 (50%) did so in the ethics sub-corpus and 12 out of 20 (60%) did so in the metaphysics, epistemology, and mind sub-corpus. Once again, this shows that articles in the history of philosophy appear to be distinctive.

8.3.7 Discuss Visual

The use and discussion of visuals (which includes figures and tables) is not common in philosophical writing. In total, only 15 of the 60 texts used visuals (25%). One common use of visuals corresponded to articles that used the argumentative strategy of experimental philosophy: All 5 articles using this strategy also included visuals. Typically, the visuals were used to represent the results of the experiment, showing how many or what percent of participants had a particular intuition about a case or thought experiment. While all 5 of these experimental philosophy articles belong to the ethics and metaphysics, epistemology, and mind sub-corpora, interestingly, the use of visuals was most common in the history of philosophy sub-corpus, where 8 out of 20 (40%) texts used them. On the other hand, for the metaphysics, epistemology, and mind sub-corpus, only 4 articles did so (20%), and for ethics, only 3 (15%). For the history of philosophy, most of the visuals were either (a) tables that summarize a conceptual analysis or the sides supported by different authors in a debate or (b) a figure showing a geometrical diagram, connected with the philosophy of physics or mathematics.

It is curious why philosophers employ visuals so infrequently. On one hand, dealing with abstract subjects and typically not dealing with quantitative data perhaps makes philosophical writing less amenable to the use of visuals. On the other hand, the use of tables to summarize conceptual analyses and varying positions in a debate seem like helpful guides to the broader discourse, and so perhaps the lack of visuals is merely a conventional aspect of philosophical writing, not something grounded in there being a lack of functional need. Future research should

continue to look into this issue to understand why visuals are seldomly used. It would also be interesting to know whether this feature of philosophical writing has changed during the past several decades, for perhaps visuals were even used less often in the past.

8.3.8 Use Standard Form

The final function explored in this chapter, *use standard form*, was only used in 14 out of 60 texts (23%); however, the function is highly peculiar to philosophy and is thus worth examining in more detail. *Use standard form* involves the use of a schematic structure to represent arguments. This structure makes explicit the premises and conclusions of an argument. For example, in the segment below from Thorpe (2018), the author numbers each line in the argument, with the final line being the conclusion of this 2-premise argument:

(V1)   If Lifelong Envatment is true, then I cannot entertain Lifelong Envatment, but

(V2)   I can entertain Lifelong Envatment; so

(V3)   Lifelong Envatment is false (p. 674).

Like with index markers for the systemic move *make generalized statement*, the markers here serve a similar function: They allow the author to later easily refer to these different parts of the argument without having to repeat the entire content. Such formalizations also function as a heuristic that allow the authors to critically evaluate the different parts of the argument. For example, after formalizing this argument, the author can then critically examine each of the premises to assure the argument is sound. It is also notable that in most cases, the argument tends to be 3-4 lines; however, there were cases in the corpus of longer arguments, the longest being a 14-line formalization (Proops, 2015). Finally, unlike some of the other functions, this one was nearly equally distributed between the three sub-corpora, with 5 occurrences in the history sub-corpus, 5 in metaphysics, epistemology, and mind, and 4 in ethics.

8.4. Conclusions

This chapter explored systemic functions, which are distinguishable from how moves and steps have traditionally been understood in the respect that these functions permeate throughout a text and are not restricted to particular sections of a text. In addition to FOOTNOTES playing this

role, this chapter also identified and discussed 7 functions occurring in the body of the text: *qualify*, *outline*, *block quote*, *use case study*, *make generalized statement*, *discuss visual*, and *use standard form*.

Three systemic functions stand out for being either obligatory or highly conventional: FOOTNOTES (100% of texts), *qualify* (100% of texts), and *outline (98% of texts)*. The function FOOTNOTES account for roughly 20% of the textual space on average, implying that philosophers spend a considerable amount of time using them for their article. In addition to functioning as citations, footnotes also are widely used to elaborate on the arguments being developed in the text. *Qualify* also occupied a considerable amount of textual space (8.5%). This function helps philosophers tidy up and make more exact the meaning of their arguments by restricting the meaning of propositions and by blocking unintended interpretations. Finally, *outline* was used in all but one article in the corpus. This function allows philosophers to preview what they will argue, recap what has been argued, and draw the reader's attention to the current place in the argument. This function is important in philosophical writing since philosophers do not use conventional discourse schema to organize their works. Thus, the function *outline* draws the reader's attention to the roadmap to help them navigate the argument.

A final interesting finding from this chapter is that there were differences across the three sub-corpora in terms of how frequently some of the systemic functions were used. The history of philosophy sub-corpus showed more use of the functions *block quote* and *use visual*, while the ethics and metaphysics, epistemology, and mind sub-corpora showed more use of the functions *use case study* and *use standard form*. This suggests that writing in the history of philosophy may be more distinctive than writing in these other philosophical domains. This point is supported by some of the findings in the previous chapters. For example, it was found in Chapter 7 that articles in the history of philosophy predominately employ the argumentative strategy *give interpretation*, which is distinct from strategies employed in the other domains.

There are two limitations worth noting. First, this analysis did not quantify the distribution of the systemic functions across macro-moves and moves. Such an analysis could reveal whether certain systemic functions co-occur with macro-moves and moves. For example, perhaps the use of case studies is more frequently carried out when advancing one's own argument than when discussing alternative solutions, or perhaps qualifications are more frequently made when evaluating than when summarizing. Second, the granularity size of systemic functions was not

precisely controlled for. While the functions in the preceding chapters were broken down into macro-moves, moves, steps, and strategies, in this chapter, there was at most two layers to the analysis (e.g., *outline* was broken down into *preview, review*, etc.). Other systemic functions might also benefit from a more fine-grained analysis. For example, given the predominance of the function *qualify*, one might attempt to discern different sub-types of this function (e.g., implication blockers v. word-meaning restrictions).

Future research should continue to theorize the construct *systemic function* and consider its relation to moves and steps. This is particularly important for coding purposes, for systemic functions occur across moves and steps yet they also help advance moves and steps. For example, *qualify* can be used across the various moves identified in Chapter 7, yet at the same time, this function helps to carry out each move that it occurs within. It would also be interesting to consider whether this construct can be further developed by relating it to similar theoretical approaches. For example, Hyland's (2005) construct of metadiscourse may be related in intricate ways to systemic functions. For instance, one type of metadiscourse are *frame markers*, which are linguistic functions used to refer to discourse acts and text stages. This metadiscourse function is often used in the systemic function *preview*, where authors outline the upcoming discourse acts that they will make. Finally, cross-disciplinary research on systemic functions should also be carried out. In particular, it would be interesting to see the extent to which other disciplines use functions like *qualify* and *outline*.

8.5 References

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CHAPTER 9 : CONCLUSION

9.1 Summary of Findings

This dissertation found that philosophy RAs can be broadly characterized as problem-solution texts. The RAs build a philosophical dialogue, and the dialectic involves putting forth solutions and critically evaluating those solutions. With respect to the highest-level rhetorical functions of the text, in addition to INTRODUCE THE PROBLEM and CONCLUDE ARGUMENT, there are three main macro-moves used by philosophers: (1) DISCUSS PROBLEM, where the philosophical problem area is summarized and analyzed, (2) DISCUSS ALTERNATIVE SOLUTION, where solutions put forth by other researchers are summarized and evaluated, and (3) ADVANCE ARGUMENT, where the author puts forth and evaluates their own philosophical argument. Only one macro-move was obligatory (occurring in each text in the corpus), ADVANCE ARGUMENT, which also took up the most amount of textual space. The other macro-moves were found to be highly conventional, most notably DISCUSS SOLUTION, which occurred in all but one text. ADVANCE ARGUMENT and DISCUSS ALTERNATIVE SOLUTION also occupied more textual space than the other macro-moves, suggesting that the critical assessment of alternative solutions and the advancing of one's own argument are the centerpieces of philosophical writing.

While there was no conventional macro-move order, 28 of the 60 texts were found to first use each macro-move in the following sequence: DISCUSS PROBLEM → DISCUSS SOLUTION → ADVANCE ARGUMENT, implying that philosophers frequently prefer introducing their own solutions only after the problem and the solution of others have been considered. This finding is semi-compatible with Geisler's (1994) argument that philosophical writing can be characterized by a path/faulty path schema, where authors first present faulty solutions before offering their own. On one hand, this dissertation did find that philosophers will often negatively assess alternative solutions before advancing their own. One the other hand, it is not the case that authors only present their view once all other solutions are dismissed; rather, an author's preferred solution is typically dispersed throughout the essay, which can be seen in the 2 types of macro-move cycles there were most commonly used (two-thirds of the corpus used at least one of the cycles): (a) cycling between DISCUSS SOLUTION and ADVANCE ARGUMENT and (b) cycling between DISCUSS PROBLEM and ADVANCE ARGUMENT.

With respect to moves, it was found that the macro-moves that constitute the body of the work primarily utilize the functions SUMMARIZE and EVALUATE. Thus, the core moves of philosophical writing involve characterizing and assessing arguments. It is also of note that, for DISCUSS SOLUTIONS, EVALUATE occupied more textual space than any other function. This function also stands out because it is typically carried out by several steps, which involves cycles of objections and replies. For example, when evaluating the solutions of others, philosophers will often critique the solution, then consider an objection to their critique, and then offer a reply to the objection. This shows that EVALUATE is the most important type of commentary that philosophers offer in regard to their own argument and the arguments of others. Other less common types of commentary include EXPLAIN (which can also involve justifying an argument), DRAW IMPLICATION, and COMPARE (the last being rather infrequent in philosophical writing).

The moves of the introduction were analyzed using an adapted version of Swales' (1990; 2004) Create a Research Space (CARS) model. The only obligatory move was found to be STATE PLAN, which also occupied the most amount of textual space among the moves. In particular, philosophers spent a considerable amount of time making the step *summarize plan*, where they describe their main argument and announce the structure of the paper. On average, philosophers used 225 words when carrying out this step. The other moves in the introduction, ESTABLISH THE TERRITORY and ESTABLISH THE NICHE were found to be highly conventional, being used in 92% and 85% of the corpus, respectively. In regard to the conclusion section, two moves were found to be conventional: SUMMARIZE ARGUMENT and ESTABLISH SIGNIFICANCE; however, on average, philosophers did not tend to spend much time on this section (the conclusion section had an average word count of 426). Overall, the introduction was found to be a more substantial (in terms of length) and rhetorically complex (in terms of the number of conventional moves and steps) section than the conclusion.

Finally, in regard to systemic functions, this dissertation found that FOOTNOTES play an important role in philosophical writing, as they were used in every text in the corpus and, on average, ran 2,576 words (occupying 19% of the textual space). Footnotes primarily offer elaboration in two ways: (a) in the form of commentary on the content of the text (e.g., by noting assumptions, making qualifications, and adding background information) and (b) by making note of and commenting on relevant literature. Two other systemic functions notable for their frequency were *qualify* and *outline*, which were used in 100% and 98% of the texts, respectively. The former

is used to prune the meaning potential of statements and arguments, and the latter helps the audience keep a mental map of the broader argumentative structure. Finally, this dissertation found three systemic functions there were highly unique to philosophical writing: *use case study*, *make generalized statement*, and *use standard form*, although each of these functions was only optional. Case studies play a particularly important role in ethics, where hypothetical scenarios are put forth to elicit philosophical intuitions. Generalized statements, on the other hand, are most common in the works on metaphysics, mind, and epistemology, where they are used to make universal claims about some domain. Finally, the use of standard form, which was infrequent for all three sub-corpora, involve a semi-formal presentation of an argument, broken down into premises and conclusions.

Overall, philosophical writing did not vary considerably across the three sub-domains: (1) ethics, (2) metaphysics, mind, and epistemology (MME), and (3) the history of philosophy. Nonetheless, a few functions were found to be distinctive to these domains. The systemic functions *block quote* and *use visual* were found to be more frequently used in the history of philosophy sub-corpus, while *case study* and *make generalized statement* were more common for ethics and MME. It was also found that authors writing in the history of philosophy primarily used the argumentative strategy *give interpretation* when advancing their arguments (17 out of 20 texts used this strategy), and when criticizing other solutions, they typically used the strategy *object by interpretation*. This suggests writing in the history of philosophy is distinctive compared to ethics and MME, which share more similarities. Indeed, arguments in the history of philosophy primarily aim at solving a distinct set of problems compared to ethics and MME: The problem is how best to understand and make coherent an argument offered by a historical figure. The historical figure, in turn, is the one aiming to solve a philosophical problem. On the other hand, for ethics and MME, authors more directly attack or advance solutions to philosophical problems.

Compared to other fields, philosophy RAs are distinctive in many respects. Unlike many RAs in the natural and social sciences, philosophical texts do not have an intro-methods-results-discussion (IMRD) macro-structure. Similar to fields like mathematics (Graves et al., 2013) and history (Holmes, 1997), philosophy RAs do not typically contain an explicit methods sections at all (with the exception that some articles in experimental philosophy do briefly describe their methods). In addition, while many of the commentary functions made in the discussion sections of RAs in the sciences are also used in philosophy RAs (e.g., *evaluate* and *draw implications*),

philosophers put the most amount of emphasis on evaluating and seldomly use the function *compare*.

With respect to the introduction, philosophy RAs were distinctive in that they seldomly established niches by the step *indicate gap*, which is consistent with related research on MA student writing in philosophy (Samraj, 2008). In addition, philosophers review literature less frequently than other fields such as engineering (Kanoksilapatham, 2015), and they do not typically *claim centrality*, which again is consistent with Samraj's (2008) findings. Finally, the conventional use of the step *summarize argument* is consistent with some disciplines, such as software engineering and computer science, but not with others, such as biomedical engineering (Kanoksilapatham, 2015; Posteguillo, 1999). As others have argued (e.g., Martín & Pérez, 2014), this may be because philosophy does not have a highly conventional macro-structure, and thus it is important to convey to audiences how the RA will be structured.

9.2 Research Significance

This dissertation has three broad impacts for genre analysis and move analysis within the English for Specific Purposes tradition. The first impact is theoretical and methodological. In Chapter 3, I argued that genres can be theoretically grounded in frame-based semantic theories (e.g., Fillmore, 1976; Lakoff, 1987; Löbner, 2013; Nirenburg & Raskin, 2004). This conception builds upon the work of Paltridge (1997) and expands it by developing a more robust notion of frames, drawing on frameworks developed by Nirenburg and Raskin (2004) as well as Barsalou (1992). Of particular importance are the illocutionary and perlocutionary aspects of a genre frame, which together constitute the communicative purpose of a genre. This conception was built by drawing upon speech act theory (Austin, 1962; Searle, 1968; Searle & Vanderveken, 1985) and applying it to complex communicative events. As I argued in the literature review in Chapter 4, this distinction can help to bring clarity to what at face-value appears to be conflicting research results, for often authors will focus on only one or the other aspect when developing a move analysis model. In addition, this distinction helps to address issues that have been raised in regard to communicative purpose being the defining feature of genre, such as Askehave and Swales' (2001) concern that communicative purpose is often complex and illusive. The frame-based understanding of genre developed in Chapter 3 also accounts for prototypicality effects that are observed in language, and it accounts for the fact that genres are often viewed as basic level

categories. Accounting for these semantic aspects of the concept genre in ESP research is important, as it grounds genre in semantic research that is now well-established in the field (e.g., Löbner, 2013; Saeed, 2016).

With respect to methodology (Chapter 5), the framework developed in Chapter 3 carries important implications for how moves and steps are understood and operationalized (e.g., the illocutionary and perlocutionary aspects of moves). In addition, Chapter 5 drew a distinction between segmental and systemic moves based on Croft and Cruse's (2004) notion of segmental and systemic parts. This distinction is important since it can address issues that have arisen in research, such as Moreno and Swales' (2018) identification of what they refer to as *announcing* and *elaborating* functions. According to the model I developed in Chapter 5, systemic functions permeate throughout a text and can appear within segmental moves. Systemic functions are distinct, however, in that they play a more over-arching function that expands across the spatial boundaries of segmental parts. Elaboration, for example, is a function that can be important for helping any segmental move.

The second impact of this dissertation is in regard to sociolinguistics. As was argued in Chapter 4, recent research has shown that writing in the humanities is distinctive compared to other fields (e.g., Holmes, 1997; Stotesbury, 2003; Tanko, 2017; Tucker, 2003). Despite this, very little move analysis research to date has intensively examined disciplines in the humanities. While there have been some cross-disciplinary move analysis studies that have examined humanities' disciplines (e.g., Holmes, 1997; Jiang & Hyland, 2016; Martín & Pérez, 2014) as well as some single discipline move analysis studies (Tanko, 2017; Tucker, 2003), this research has tended to have a narrow focus, either examining only a single section of the research article or a particular linguistic aspect of a type of move or step. This dissertation addresses this gap by showing the macro-structure and move structures used in the entire philosophy RA. As was shown in Chapters 6, 7, and 8, philosophical writing is in many respects distinctive from other fields in regard to the types of functions and the ordering of the functions. This research thus helps to fill in the broader picture of what writing in the humanities is like, and it helps extend move analysis research to previously uncharted areas.

The final impact of this research is pedagogical. Move analysis research has often been used to draw pedagogical implications, particularly for L2 users of English (e.g., Chang & Kuo, 2011; Cotos et al., 2016). Such research can involve building corpora that learners can be trained

to navigate and analyze, or researchers can provide learners with rhetorical options by extracting moves and steps found in research. While this dissertation did not explicitly draw pedagogical implications, the results of this research can be used for instructional purposes. For example, instructors could present the results of Chapters 6, 7, and 8 to L2 graduate students to show them rhetorical options they have for structuring their research papers and for summarizing and evaluating arguments. The macro-move sequences and cycles and the lists of possible moves, steps, and strategies would also show learners there is a wealth of options to draw upon. This would help writers expand their conception of the ways in which an essay can be structured and fleshed out. It could also help them become better readers when navigating research articles.

9.3 Limitations and Future Research

To conclude this dissertation, let me make note of a few limitations and directions for future research. First, regarding the sample of research articles used for this dissertation, there are a few concerns: (a) the journals were all generalist journals in the field, publishing research on a wide array of topics. On one hand, this criterion was important in that it helped in sampling from articles on a wide range of topics. On the other hand, however, the lack of specialist journals means that there may be discourse structures and moves that were missed because some may be highly specific to a certain area of philosophy (e.g., the philosophy of mathematics or social-political philosophy). (b) The journals were all top-ranked journals in the field. While this may represent what some of the most highly regarded philosophical writing looks like, this does not necessarily mean that this is representative of the broader field. (c) The sample was only 60 articles, which, while for move analysis research on a single discipline is higher than average (see Chapter 5), it nevertheless is small for making generalizations. Thus, future research should aim to sample additional research articles from a wider range of journals to better understand philosophical writing. Analyzing additional genres in philosophy, such as the BOOK REVIEW and RESEARCH MONOGRAPH, would also help in painting the broader picture of philosophical writing.

Second, while Chapter 3 identified the illocutionary and perlocutionary aspects of *genre* as core elements, this distinction was not rigorously applied to moves and steps when building the code book. This task is particularly difficult with regard to the perlocutionary aspect, as several steps or moves might work in conjunction to advance one perlocutionary aim. This dissertation mostly relied on identifying the illocutionary aspect of moves and steps, particularly in the macro-

moves of the body of the work (e.g., EVALUATE, SUMMARIZE, etc.). While identifying the conventional perlocutionary aim of these functions may not change how moves and steps are demarcated (e.g., the conventional perlocutionary aim of EVALUATE is typically to persuade the audience that an argument is effective or defective), the identification of this aspect would help build a more principled approach to analyzing moves and steps. It could also be of pedagogical assistance in that it could help learners gain a more comprehensive understanding of how they can use language. Finally, Askehave and Swales' (2001) argument about the complex nature of communicative purpose also applies to certain rhetorical functions, particularly those in the introduction and discussion sections: There may be certain perlocutionary aspects that are somewhat hidden or indirect in the discourse that need to be uncovered, such as promotional functions, which has been the subject of recent research (Afros & Schryer, 2009; Wang & Yang, 2015). For example, when making the move ESTABLISH THE TERRITORY, it is arguable that authors sometimes aim to promote the importance of their research area. All things considered, using this framework to demarcate illocutionary and perlocutionary aspects should help future researchers synthesize what sometimes appear to be disparate findings.

Third, this study did not apply analyses of statistical significance when examining differences across moves and steps nor differences across disciplines. Future research should include relevant statistical procedures to make more probable arguments regarding differences that are found in these areas.

In conclusion, this dissertation has shown that philosophical writing is highly distinctive from other fields and disciplines. Future research should continue to explore writing in the humanities through the lens of genre and move analysis to gain a more comprehensive understanding of academic writing, which can be used to assist burgeoning professionals in the field.

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APPENDIX : CORPUS OF RESEARCH ARTICLES

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