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**Systematic literature reviews:
Four applications for interdisciplinary research**

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Running head: FOUR APPLICATIONS OF SYSTEMATIC LITERATURE REVIEWS

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Systematic literature reviews:**Four applications for interdisciplinary research****Highlights**

- Many pragmatics projects have an interdisciplinary focus.
- We argue that systematic literature reviews are appropriate for interdisciplinary integration.
- We provide four applications for systematic literature reviews in interdisciplinary research.
- These are (1) mapping constructs across disciplines; (2) bridging theories.
- They also include (3) contrasting research methods; (4) quantitative meta-analysis.

Systematic literature reviews:**Four applications for interdisciplinary research****Abstract**

Many projects in the field of pragmatics are interdisciplinary, for instance because they combine elements from linguistics with a specific field of application (e.g., pedagogy, health, or politics). Furthermore, a trend towards projects in larger research consortia and/or with societal partners entails that interdisciplinarity will remain a feature of pragmatics projects in the near future. While such interdisciplinary projects can lead to important new insights, they also present specific challenges.

In this contribution, we propose that systematic literature reviews are an appropriate research method to use at the start of an interdisciplinary research project. Systematic literature review is a type of research synthesis that can be used to create an overview of the state of the art of research on a specific topic. We briefly outline the steps of a systematic literature review, and give four applications of systematic literature reviews in interdisciplinary research: (1) mapping different approaches to the same topic across disciplines, (2) bringing together different theoretical perspectives, (3) contrasting different research methods used to answer the same research question and (4) quantitative meta-analysis. We illustrate each type of application with an example of a systematic literature review focusing on (metaphorical) framing in political discourse.

Key words: systematic literature review, research synthesis, interdisciplinary research, metaphorical framing

Systematic literature reviews: Four applications for interdisciplinary research

1. Introduction

Various scholars propose that interdisciplinarity is an important aspect of pragmatics research (e.g., Capone & Mey, 2015; Verschueren, 2012). We open this contribution by exploring three reasons why an interdisciplinary outlook is important for the field. Next, we propose that research synthesis in general, and systematic literature review in particular, is an important method to use at the start of research projects with a strongly interdisciplinary focus. Systematic literature review (e.g., Boland, Cherry & Dickson, 2017) is a method that has been widely used in other disciplines like the medical sciences, psychology and communication science, but may be relatively unfamiliar to the pragmatics community. We continue with a brief explanation of the method of systematic literature review, and follow up with four different applications of systematic literature reviews. We illustrate each application with an example review on the topic of (metaphorical) framing in political discourse.

2. Interdisciplinary research on language and communication

Interdisciplinary research “analyzes, synthesizes and harmonizes links between disciplines into a coordinated and coherent whole” (Choi & Pak, 2006, p. 359).¹ In many ways, advancing interdisciplinary research is getting more important across research disciplines, and the boundaries between academic disciplines are becoming less fixed. The importance of

¹ Interdisciplinary research can be distinguished from other approaches to multiple-disciplinary research such as multidisciplinary research. Multidisciplinarity “draws on knowledge from different disciplines but stays within the boundaries of those fields” (Choi & Pak, 2006, p. 359). By contrast, interdisciplinarity moves beyond the boundaries of different fields, and towards integration.

interdisciplinarity is also reflected in research on pragmatics (see Capone & Mey, 2015; Verschueren, 2012).

Pragmatics research touches upon interdisciplinarity in at least three distinct ways. First, many papers combine theories and constructs from linguistics with applications to communicative situations relevant to other fields of application, ranging from pedagogy (e.g., Cirillo, 2019) to health (e.g., Nielsen, 2019), politics (e.g., Musolff, 2017), and commercial advertising (e.g., Pérez-Sobrino, Littlemore & Houghton, in press). In such projects, scholars engage in interdisciplinary research that requires a careful consideration of the linguistics literature, general literature on communication and the specialized literature from the field of application.

Second, important topics for pragmatics are relevant to and studied in other disciplines as well. For instance, a variety of studies in pragmatics focuses on the linguistic construction of social stereotypes (e.g., Croom, 2015; Sierra, in press). At the same time, the question how language contributes to stereotype formation, sharing and maintenance has been studied in other disciplines, such as communication science and (social) psychology (e.g., Beukeboom & Burgers, 2019). Unfortunately, most empirical literature in these fields only shows limited overlap and interaction. Connecting literature on a topic that is studied from multiple disciplines (including pragmatics) is thus an important additional challenge for our field. In that way, our community can start a dialogue with these other disciplines, foster mutual knowledge exchange and interaction, and push forward both our field and the other discipline(s) involved.

Third, a growing societal trend in various countries is stimulating academic research into the challenges facing society today, through larger, multidisciplinary research consortia. A recent initiative in this respect is the Dutch National Research Agenda (<https://wetenschapsagenda.nl/?lang=en>), which was initiated by a variety of organizations

involved with Dutch higher education, such as the Royal Netherlands Academy of Arts and Sciences (KNAW), the Association of Universities in the Netherlands (VSNU) and the Netherlands Organization for Scientific Research (NWO). The Research Agenda was driven by a bottom-up call in which Dutch citizens and organizations were asked to indicate the pressing societal issues on which university research should focus. A total of 140 core questions organized into twenty-five topical ‘routes’ were distilled from the submitted answers. As a next step, Dutch funding organizations like NWO have set up calls for research into these routes, often explicitly asking for multidisciplinary cooperation between scholars from different disciplines and for explicitly involving societal stakeholders in these projects. Beyond the Netherlands, various national and transnational organizations (such as the European Union’s Horizon 2020 initiative) are setting up similar initiatives calling for collaboration across academic disciplines and/or with societal stakeholders.

Research collaborations in larger consortia and/or with societal stakeholders also offer opportunities for pragmatics researchers. After all, various calls relate to societal topics that have been studied from a pragmatics perspective. For instance, routes of the Dutch National Research Agenda focus on topics like ‘resilient societies’, ‘conflict and cooperation’ and ‘sustainable development’. The topic of resilient societies has, among others, been studied from the perspective of metaphor, by focusing on situations in which metaphors can empower or disempower language users (e.g., Reuchamps, Dodeigne & Perrez, 2018; Semino, Demjén, Demmen et al., 2017). Various pragmatics studies have also focused on the ways in which language contributes to fostering cooperation and conflict (e.g., Norrick & Spitz, 2008; Prior, in press). Furthermore, various studies have focused on how language constructs and reflects sustainability issues (e.g., Jaspert, Van de Velde, Brône et al., 2011; Nerlich & Kotyeko, 2010). Given the important insights into the role of language and communication in these

societal challenges, it is highly desirable that the knowledge and expertise of pragmatics researchers be included in interdisciplinary projects dealing with such societal challenges.

In sum, interdisciplinarity is important for pragmatics in a variety of ways. In some research projects, two or more of the issues discussed above may be connected. For instance, linguistic stereotyping is both a topic that is studied from a variety of disciplines, and a topic that has high relevance for societal challenges related to diversity and equality. However, interdisciplinary research also presents specific challenges. After all, different disciplines may use different methods and approaches for the same topic. Furthermore, it may be difficult to determine the state of the art of research on a particular topic in a discipline different from one's own. One of the ways in which researchers can deal with these issues is by starting their project with a research synthesis, taking into account the literature from all disciplines relevant to the issue at hand (both taken from the pragmatics literature and from other fields). We propose that a systematic literature review may be a particularly appropriate method in these cases.

3. Systematic literature reviews

As of early 2019, one of the options that can be formally selected when submitting an article to *Journal of Pragmatics* is “Invited Review Article”. At the time of the writing of this article in Spring 2019, this is thus a relatively new option, indicating that research syntheses are still relatively rare in our field. For instance, we could find one recent paper in *Journal of Pragmatics* published prior to 2019 that explicitly uses the method of systematic literature review (Berger, Viney & Rae, 2016). We thus start this section with a brief explanation of the method and steps of systematic literature reviews.

A systematic literature review seeks to evaluate the state of the literature on a specific topic or research question (RQ). It is a structured approach to research synthesis, following a

number of pre-determined steps (e.g., Boland et al., 2017; Gough, Oliver & Thomas, 2017; Higgins & Green, 2008). As we will see, a systematic literature review can be a research study in its own right (see sections 3.1-3.3) or serve as the first step for a quantitative meta-analysis (section 3.4).

A first step of a systematic literature review is determining a specific and clearly delineated RQ to be answered. It is important that this RQ is posed in the form of a question or hypothesis that can be answered through a comparison of relevant studies. Thus, starting a systematic literature review with a general topic description (e.g., ‘metaphor and political discourse’) is not recommended. In such cases, the search may yield different types of studies that are difficult to compare. Systematic literature reviews yield more relevant insights when starting from a question that narrows down the topic of interest. For instance, Boeynaems, Burgers, Konijn and Steen (2017) were interested in the persuasive effects of metaphorical framing in political communication. This particular RQ explicitly focuses on metaphorical framing, thus excluding other types of framing *a priori*.

When a systematic literature review’s RQ has been determined, scholars have to establish inclusion criteria, specifying which kinds of studies will be used to answer that question (Boland et al., 2017). These inclusion criteria thus make more explicit which (types of) studies should be included. In the case of the systematic literature review by Boeynaems et al. (2017) on persuasive effects of metaphorical frames in political communication, the researchers thus had to make a number of inclusion decisions such as (a) what constituted a metaphorical frame, (b) what constituted a test of persuasion, (c) what counted as political communication, and (d) whether the systematic literature review would entail primary studies only, or both studies reporting on primary and secondary data.

We would like to note that the development of these inclusion criteria is a crucial, yet difficult aspect of any systematic literature review. Particularly for interdisciplinary topics,

studies may be conducted from different research paradigms and start from different definitions and conceptualizations of core concepts. The review by Boeynaems et al. (2017) had to define concepts like ‘metaphor’ and ‘persuasion’, which have been defined in different ways by different scholars. For instance, some scholars argue that “dead metaphors” should no longer be counted as metaphors, because recipients do not need to consider the source domain in order to understand them (e.g., Alm-Arvius, 2006). By contrast, other scholars disagree and propose that “dead metaphors” (Lakoff, 1987) and primary metaphors (Grady, 2005) should be seen as important metaphor types, even though they are highly conventional. Similarly, for persuasion, some scholars propose that effects on behavior are most important (e.g., Kok et al., 2018), while others argue that persuasion effects can be found on a variety of variables, such as beliefs, attitudes, intentions and behaviors (e.g., Ajzen, 1991). Scholars conducting a systematic literature review should be aware of such potential differences in conceptualization of key constructs and explicitly choose their own conceptualization through their inclusion criteria. We recommend that, whenever possible, scholars choose operationalizations that do justice to the widest variety of potentially relevant approaches and research traditions related to the topic of interest.

After inclusion criteria have been developed, scholars determine a search string with Boolean operators for the retrieval of potentially relevant publications (e.g., Higgins & Green, 2008). This search string includes the key terms that are used to search specific journals or research databases (e.g., Web of Science, PsychArticles) relevant to the RQ at hand. In the case of Boeynaems et al. (2017), these disciplines included linguistics, communication science, social psychology and political science. Scholars also need to determine whether they include backward *reference* searching (i.e., reviewing the bibliography of relevant publications for other potentially relevant publications) and/or forward *reference* searching (i.e., searching for more recent publications that cite relevant publications) in their search

protocol. In addition, in the search protocol, scholars can include backward or forward *author* searching, i.e., searching for older (backward search) or more recent (forward search) relevant publications written by authors of relevant publications.

This type of search strategy implies that systematic literature reviews take a bottom-up approach. That is, the literature to be synthesized is extracted in a systematic search of relevant journals or research databases. This particular step sets systematic literature reviews apart from narrative reviews. Narrative reviews aim to “tell a story” (Ellis, 2015) by discussing the literature about a specific topic that their authors find most relevant. Many narrative reviews start from a top-down approach², which means that their authors pre-select which theories and/or empirical studies are the starting point for a review on a particular topic. While both types of research syntheses are very valuable and can yield many important insights, we propose that systematic literature reviews may be more appropriate for reviews of interdisciplinary topics. The bottom-up extraction approach allows researchers the possibility of identifying as wide a range as possible of potentially relevant publications from their own discipline and from other disciplines.³

The next step of a systematic literature review entails determining which of the retrieved, potentially relevant publications are actually relevant and should be included in the systematic literature review, by assessing each publication against the inclusion criteria (Boland et al., 2017; Higgins & Green, 2008). After determining which publications will be

² Following Ellis (2015), we use the term ‘narrative review’ as an umbrella term for different types of research syntheses such as state-of-the-art review or critical review. While such types of research syntheses can differ in certain aspects, most start from this top-down approach.

³ In every interdisciplinary systematic literature review we conducted, we identified a number of highly relevant publications we did not yet know beforehand, most often coming from disciplines different from our own.

included, scholars continue with a content analysis of these publications. In order to do so in a systematic way, scholars are advised to use a pre-determined and standardized codebook.

Boeynaems et al. (2017) for instance coded for the different types of metaphors used (e.g., war metaphors, anthropomorphic metaphors) and distinguished different types of persuasive effects. Ideally, studies are coded by more than one coder to determine intercoder reliability.⁴ After coding has been completed, patterns are identified across the included studies to answer the systematic literature review's RQ.⁵

Systematic literature reviews have been a popular method to synthesize literature in disciplines like the medical sciences, communication science and psychology. In the medical sciences, systematic literature reviews are indexed in specific databases like the Cochrane Library (<https://www.cochranelibrary.com/cdsr/reviews/topics>), enabling interested researchers to easily find them. In other fields, they are often published in specialized journals such as *Review of Communication Research* (communication science) or *Psychological Review* (psychology). In this contribution, we propose that systematic literature reviews are also suitable for disciplines like pragmatics, which include many interdisciplinary projects. Starting such interdisciplinary projects with a systematic literature review is particularly useful to map the state of the art on the topic of interest in the disciplines involved.

Next, we present four different applications of systematic literature reviews from earlier studies that may be relevant to apply to pragmatics issues and questions. In each

⁴ For a discussion of reliability in coding data, see Bolognesi, Pilgram and Van den Heerik (2017).

⁵ This description of the method of systematic literature review is necessarily short. Readers interested in conducting a systematic literature review themselves are advised to consult a handbook specifying these steps in more detail (e.g., Boland et al., 2017; Gough et al., 2017; Higgins & Green, 2008).

application, we refer to an example systematic literature review on (metaphorical) framing in political discourse.

3.1 Application 1: Mapping different approaches to the same topic across disciplines

A first goal of a systematic literature review entails showing how a specific theoretical construct has been defined and operationalized differently across research disciplines. In such cases, it may be possible that scholars from each field theorize about and operationalize the topic in different ways (see also Berger et al., 2016). A systematic literature review can take a multidisciplinary approach and help to categorize these different approaches in the research fields involved.

Framing is one such topic that has been widely studied across disciplines, including linguistics (e.g., Semino et al., 2018), communication science (e.g., Entman, 1993), psychology (e.g., Tversky & Kahneman, 1981) and political science (e.g., Bougher, 2012). Framing deals with the way in which specific aspects of a topic are presented and/or foregrounded in a communicative situation (e.g., Entman, 1993; Semino et al., 2018). For instance, in the Dutch Provincial Elections of March 2019, conservative liberal party VVD launched an election campaign modeled on the frame of the Netherlands as a fragile and precious Delftware vase. One VVD campaign ad even featured a parody of the Dutch version of the TV program *Antiques Roadshow*, in which Prime Minister Mark Rutte brought the ‘21st-century Dutch vase’ for appraisal (VVD, 2019). In this way, the VVD party used this specific ‘Dutch vase’ frame with the aim of communicating an image of the VVD as a responsible custodian of Dutch culture and society.

Many studies have focused on framing, but have used different definitions and operationalizations of this concept. In a systematic literature review of experimental research into political framing (Brugman & Burgers, 2018), we focused on the question of how

scholars from different disciplines prefer specific approaches to framing over others. Results showed that, across disciplinary backgrounds, scholars have a different preference for approaches to framing, and that these differences between disciplines have remained constant over time. Specifically, our systematic literature review focused on two distinctions between frames.

The first is the difference between equivalence and emphasis frames, which has been widely debated in the framing literature (Cacciatore, Scheufele & Iyengar, 2016). Equivalence frames present the same information in different ways. For instance, when discussing government policies related to the labor market, politicians can frame employment figures from a perspective emphasizing employment (e.g., 90% employment) or from a perspective emphasizing unemployment (e.g., 10% unemployment; Druckman, 2001).

Emphasis frames, by contrast, focus on different elements of a political issue (Brugman & Burgers, 2018). After all, most policy issues are very complex and can be approached from a variety of angles. For instance, politicians discussing a complex political issue like Brexit can focus on economic, social and/or cultural consequences, to name but a few options. In these frames, speakers thus emphasize different aspects of a topic and can also (partly) focus on different information within the same broader topic. We found that, across disciplines (e.g., linguistics, communication science, political science) emphasis frames were used more often than equivalence frames, but also that equivalence frames were used more often in psychology compared to other disciplines.

The second distinction was between generic and issue-specific frames (Brugman & Burgers, 2018). A generic frame can be applied to a wide variety of political issues. Examples include gain frames and economic-consequences frames. By contrast, issue-specific frames are relevant to one issue only, such as horserace frames which apply to political elections. We found that, across disciplines, generic and issue-specific frames were used in equal measure,

but, overall, generic frames were used less often in communication science than in other disciplines.

Such an overview of disciplinary differences of the same theoretical construct can make us aware that, even though it may seem that scholars from different disciplines study the same construct, their operationalization of that construct may differ in important respects. The approach of systematic literature reviews can thus be a fruitful start for researchers who want to map how different disciplines conceptualize and/or operationalize the same construct.

3.2 Application 2: Bringing together different theoretical perspectives

A second goal of a systematic literature review can be to actively bring together different theoretical perspectives and traditions. For instance, linguistic research on framing often focuses on the question of how metaphors can construct frames (e.g., Lakoff & Johnson, 1980/2003), as in the case of the metaphorical frame portraying the Netherlands as a vase (VVD, 2019). However, in other disciplines dealing with framing such as communication science or political science, metaphor is not necessarily a key concept. For instance, Aalberg, Strömbäck and De Vreese (2012) provide an overview of communication-scientific studies that have framed politics as either a strategy or a game. While both the strategy and game frames reflect well-known conceptual metaphors to discuss politics (see Lakoff & Johnson, 1980/2003), the metaphor angle is not explicitly explored in this particular literature.

In some of these cases, studies focus on frames that are metaphorical at a conceptual level only (metaphorical-concept frames; Renardel de Lavalette, Steen & Burgers, in press). Studies focusing on metaphorical-concept frames classify frames based on whether specific policies reflect the general idea or concept underlying a metaphorical concept. For instance, Lakoff's (1996/2003) Theory of Moral Politics (TMR) proposes that the distinction between metaphorical frames of a political leader as either a *strict father* or *nurturant parent* is

influential in explaining differences in political preference between conservatives and liberals. Metaphorical-concept studies testing these predictions (e.g., Moses & Gonzales, 2015; Ohl, Pfister, Nader & Griffin, 2013) focus on whether the values typically associated with one of these leader figures are reflected in a specific statement or text. Thus, in case a statement emphasizes values typically associated with a strict-father leader (e.g., ‘hard work’, ‘independence’), it is classified as belonging to a strict-father frame.

In another systematic literature review (Brugman, Burgers & Steen, 2017), we searched for experimental studies, published from 2000 onwards, that included political framing as an independent (predictor) variable. We then looked at each frame and coded whether it could be classified as a metaphorical-concept frame (e.g., strategy frame, horserace frame, game frame), or not (e.g., issue frame, positive frame). In total, we identified 870 frames in 319 studies. Our analysis showed that 27.9% of experimental studies included at least one metaphorical-concept frame and that 16.6% of frames were metaphorical-concept frames.

Such insights have important implications for the disciplines involved. For communication science, results demonstrated that metaphors may be more pervasive in and important for the framing literature than previously assumed (considering that more than one-fourth of all experimental studies on political framing included at least one metaphorical-concept frame). For linguistics, these findings open up new literature from the perspective of metaphors and framing that may have hitherto been unexplored. Bringing together this new literature with the established pragmatics literature could lead to new insights for the field. A systematic literature review is thus a good way to examine materials used across studies and bridge two related strands of literature that used to engage in relatively little interaction.

3.3 Application 3: Contrasting different methods used to answer the same RQ

Our first two applications of systematic literature reviews focused on synthesizing a particular topic across research fields, either by showing how different fields define and operationalize the same construct in different ways (application 1), or by showing how different theoretical approaches can be bridged (application 2). Nevertheless, the most common application of research-synthesis methods like systematic literature review focuses on empirical findings in a body of literature and on the relationship between specific variables across studies (Higgins & Green, 2008, p. 6). In cases in which all relationships of interest are quantitatively measured in a relatively comparable research set-up, a meta-analysis (see section 3.4) is a valuable method for synthesizing the literature (Norris & Ortega, 2007). However, many studies in pragmatics and in other disciplines measure relationships between variables in a large variety of ways and/or use different research set-ups that would be difficult to compare in a meta-analysis. In such cases, bringing together a body of literature with such a variety in methods and/or research set-ups in one analysis can be achieved through a systematic literature review.

An example of this third type is our systematic literature review (Boeynaems et al., 2017) contrasting studies on the effects of metaphorical frames on political persuasion from two perspectives: a critical-discourse approach (CDA) and a response-elicitation approach (REA). In this review, we focused on studies looking at the effects of verbal metaphors ('metaphorical-words frames') in political discourse. CDA studies focus on the level of a specific discourse and are typically qualitative. In their analysis, CDA studies look at real-world changes as a result of the use of specific (metaphorical) language. These types of studies often involve case studies in which the impact of one or several metaphors is tracked through a discourse in a particular time frame. For instance, if scholars wanted to conduct a CDA study on the impact of the 'Dutch vase' frame, they would study whether and how other (Dutch) societal actors use this particular vase metaphor (or not), and under which

circumstances societal actors would adapt or challenge the vase frame (as in Verdonschot, 2018).

By contrast, REA studies measure how people respond after being exposed to (metaphorical) frames about an issue. This means that, in REA studies, human participants are the unit of analysis. REA studies can use both qualitative (e.g., semi-structured interview) and quantitative (e.g., experiment) research methods. Scholars interested in running an REA study on the impact of the ‘Dutch vase’ frame could for instance expose groups of participants to this metaphorical frame and one or more competing frames, and measure whether and how such exposure impacts participants’ political beliefs and attitudes.

Boeynaems et al. (2017) focused on similarities and differences between CDA and REA studies. Our analysis mainly revolved around (a) the types of metaphorical-words frames used in the two types of studies and (b) the effects of metaphorical-words frames reported. For the types of metaphorical frames used, the authors found both similarities and differences between CDA and REA studies. In terms of similarities, we found that some source domains were studied in both types of studies, such as war metaphors and anthropomorphic metaphors. In terms of differences, REA studies contained more positive frames than CDA studies. Furthermore, while CDA studies contained real-life discourse, some REA studies contained frames that were (partly) created for the purpose of the study.

In terms of reported effects, we mainly found differences between the two approaches. These differences entailed the presence, strength and direction of effects. Compared to REA studies, CDA studies more often reported effects of metaphorical frames. These CDA effects were also reported to be stronger and more often in line with the position implied by the metaphorical frame than effects reported in REA studies. In these ways, systematic literature reviews can help to integrate research from different traditions using different methods (qualitative and quantitative). This subsequently can make explicit how these different

approaches and traditions that study similar phenomena converge and diverge, which could provide inspiration for further interdisciplinary research.

3.4 Application 4: Quantitative meta-analysis

A fourth application of systematic literature reviews is that they can function as the first phase of a quantitative meta-analysis (Lipsey & Wilson, 2001). Meta-analyses provide a statistical synthesis of a specific relationship between variables across studies based on weighted effect-size estimates (Ellis, 2015). This means that meta-analyses can be used to integrate quantitative research studies that answer a particular question. In this respect, the aim of a quantitative meta-analysis is similar to the application of systematic literature reviews discussed in section 3.3: in both cases, the analysis gives an overview of empirical findings in the literature. While a systematic literature review of the type discussed in section 3.3 can contain both quantitative and qualitative studies, a meta-analysis contains only quantitative studies.

A meta-analysis can help researchers in addressing the state of the art in quantitative research on a particular topic. Various researchers have recently proposed moving away from solely using statistical significance (i.e., the binary decision whether an effect is statistically significant or not; see Amrhein et al., 2019; Nature Editors, 2019). Instead, they call for a more nuanced perspective on the quantitative relationship between variables. One application of such a nuanced perspective is a focus on effect sizes (see also Cohen, 1992). Meta-analysis takes effect sizes as a central variable of interest (e.g., Ellis, 2015; Lipsey & Wilson, 2001).

A meta-analysis starts from a systematic literature review, in that the literature is systematically searched for quantitative studies of interest. After the systematic-review part of a meta-analysis has been completed, authors code for and standardize effect sizes of interest from all relevant studies. Subsequently, scholars run a statistical model in which effect sizes

are weighted and compared, to determine what the literature reveals about the relationship between specific variables of interest.⁶

The popularity of meta-analyses seems to vary between linguistic sub-disciplines. For instance, meta-analyses are a popular method of research synthesis in applied linguistics (Ellis, 2015; Norris & Ortega, 2007). By contrast, meta-analysis seems less well known in psycholinguistics, given that a recent paper introduced meta-analysis as a “novel method” to the field (Rákosi, 2018). Across academic disciplines, different meta-analyses have looked at the persuasive impact of verbal metaphors (e.g., Rákosi, 2018; Sopory & Dillard, 2002, Van Stee, 2018). These meta-analyses consistently found that metaphors have a statistically small effect on persuasion, and that effect sizes differ between metaphors, topics, and other conditions.

Bringing together different theoretical approaches can open up new questions for analysis. For instance, our earlier review (Brugman et al., 2017, see section 3.2) showed that many social-scientific framing studies contained at least one metaphorical-concept frame. Because many of these framing studies did not explicitly reference metaphor, they were excluded from earlier meta-analyses into the effects of metaphor. These earlier meta-analyses (e.g., Rákosi, 2018; Sopory & Dillard, 2002, Van Stee, 2018) mainly focused on metaphorical-words frames. Thus, we conducted a meta-analysis in which we contrasted effects of metaphorical-words frames and metaphorical-concept frames (Brugman, Burgers & Vis, in press).

Overall, results from Brugman et al. (in press) revealed a statistically small effect of metaphor, in line with meta-analyses published earlier (Sopory & Dillard, 2002, Van Stee,

⁶ This description of the method of meta-analysis is necessarily short. Readers interested in conducting a meta-analysis are advised to consult a meta-analysis handbook (e.g., Lipsey & Wilson, 2001).

2018). Furthermore, isolated effects of the two groups of metaphorical-words and metaphorical-concept frames on persuasion were statistically significant. However, we also found differences between the two approaches, with effect sizes being larger for metaphorical-concept (vs. metaphorical-words) frames. Such results show that metaphors can have persuasive effects through both words and concepts, and that it is important to further specify which elements (words vs. concepts) stimulate which effects for which audience members at which times. Thus, a meta-analysis can also reveal new insights and open up new research questions spanning several disciplines.

4. Conclusion

We argue that interdisciplinarity is an important aspect of many research projects in pragmatics. Furthermore, the current societal trend towards stimulating research in larger multidisciplinary consortia and/or with societal partners entails that more future projects will likely be designed from an interdisciplinary outlook. While the exchange of knowledge and insights from different disciplines can be stimulating for a project and lead to new research ideas and opportunities, conducting interdisciplinary research can also be challenging. We propose that conducting a systematic literature review is a good way to start a larger research project, especially when that project has an explicitly interdisciplinary outlook.

Systematic literature reviews are conducted in a systematic way, following a number of pre-determined steps involving the formulation of the RQ and the inclusion criteria, the formulation and execution of the search strategy, and the coding of the included publications. We listed four ways in which a systematic literature review can help researchers to survey the interdisciplinary research landscape. These applications are (1) mapping different approaches to the same topic across disciplines, (2) bringing together different theoretical perspectives, (3) contrasting different research methods used to answer the same RQ and (4) quantitative

meta-analysis. We have illustrated each application type with an example of a review that focused on the topic of (metaphorical) framing in political discourse. We would like to stress that we do not assume that these are the only four applications of systematic literature reviews. In fact, we think and hope that, when systematic literature reviews become more widely used in our disciplines, scholars will supplement these applications with other possible applications.

We are supportive of the growing trend towards stimulating research collaborations across disciplines and with societal partners, as they can lead to important new insights and breakthroughs. We also think that such interdisciplinary collaborations yield most results when they start from the strength of all disciplines involved. Systematic literature reviews are an important way to map commonalities and differences between disciplines. We thus hope that the current article sets the stage for more systematic literature reviews and other forms of research syntheses in pragmatics.

References

- Aalberg, T., Strömbäck, J., & de Vreese, C.H. (2012). The framing of politics as strategy and game: A review of concepts, operationalizations and key findings. *Journalism*, 13(2), 162-178. doi:10.1177/1464884911427799
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. doi:10.1016/0749-5978(91)90020-T
- Alm-Arvius, C. (2006). Live, moribund, and dead metaphors. *Nordic Journal of English Studies*, 5(1), 7-14.
- Amrhein, V., Greenland, S., & McShane, B. (2019). Retire statistical significance. *Nature*, 567, 305-307. doi:10.1038/d41586-019-00857-9
- Berger, I., Viney, R., & Rae, J.P. (2016). Do continuing states of incipient talk exist?. *Journal of Pragmatics*, 91, 29-44. doi:10.1016/j.pragma.2015.10.009
- Beukeboom, C.J., & Burgers, C. (2019). How stereotypes are shared through language: A review and introduction of the Social Categories and Stereotypes Communication (SCSC) Framework. *Review of Communication Research*, 7, 1-37. doi:10.12840/issn.2255-4165.017
- Boeynaems, A., Burgers, C., Konijn, E.A., & Steen, G.J. (2017). The effects of metaphorical framing on political persuasion: A systematic literature review. *Metaphor and Symbol*, 32(2), 118-134. doi:10.1080/10926488.2017.1297623.
- Boland, A., Cherry, M.G., & Dickson, R. (2017). *Doing a Systematic Review*. London: Sage.
- Bolognesi, M., Pilgram, R., & van den Heerik, R. (2017). Reliability in content analysis: The case of semantic feature norms classification. *Behavior Research Methods*, 49(6), 1984-2001. doi:10.3758/s13428-016-0838-6
- Bougher, L.D. (2012). The case for metaphor in political reasoning and cognition. *Political Psychology*, 33(1), 145-163. doi:10.1111/j.1467-9221.2011.00865.x

- Brugman, B.C. & Burgers, C. (2018). Political framing across disciplines: Evidence from 21st-century experiments. *Research & Politics*, 5(2). doi:10.1177/2053168018783370
- Brugman, B.C., Burgers, C., & Steen, G.J. (2017). Recategorizing political frames: A systematic review of metaphorical framing in experiments on political communication. *Annals of the International Communication Association*, 41(2), 181-197.
doi:10.1080/23808985.2017.1312481
- Brugman, B.C., Burgers, C., & Vis, B. (in press). Metaphorical framing in political discourse through words vs. concepts: A meta-analysis. *Language and Cognition*.
doi:10.1017/langcog.2019.5
- Cacciatore, M.A., Scheufele, D.A., & Iyengar, S. (2016). The end of framing as we know it... and the future of media effects. *Mass Communication and Society*, 19(1), 7-23.
doi:10.1080/15205436.2015.1068811
- Capone, A., & Mey, J.L. (Eds.). (2015). *Interdisciplinary Studies in Pragmatics, Culture and Society*. Cham: Springer.
- Choi, B. C., & Pak, A. W. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: Definitions, objectives, and evidence of effectiveness. *Clinical and Investigative Medicine*, 29(6), 351-364.
- Cirillo, L. (2019). The pragmatics of air quotes in English academic presentations. *Journal of Pragmatics*, 142, 1-15. doi:10.1016/j.pragma.2018.12.022
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155-159.
doi:10.1037//0033-2909.112.1.155
- Croom, A.M. (2015). Slurs and stereotypes for Italian Americans: A context-sensitive account of derogation and appropriation. *Journal of Pragmatics*, 81, 36-51.
doi:10.1016/j.pragma.2015.03.014

- Druckman J.N. (2001). Using credible advice to overcome framing effects. *Journal of Law, Economics, and Organization*, 17(1), 62–82. doi:10.1093/jleo/17.1.62
- Ellis, R. (2015). Complementarity in research syntheses. *Applied Linguistics*, 36(3), 285-289. doi:10.1093/applin/amv015
- Entman, R.M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51-58. doi:10.1111/j.1460-2466.1993.tb01304.x
- Gough, D., Oliver, S., & Thomas, J. (Eds.). (2017). *An Introduction to Systematic Reviews*. London: Sage.
- Grady, J. (2005). Primary metaphors as inputs to conceptual integration. *Journal of Pragmatics*, 37(10), 1595-1614. doi:10.1016/j.pragma.2004.03.012
- Higgins, J.P., & Green, S. (Eds.). (2008). *Cochrane Handbook for Systematic Reviews of Interventions*. Hoboken, NJ: Wiley.
- Jaspert, K., Van de Velde, F., Brône, G., Feyaerts, K., & Geeraerts, D. (2011). Does framing work? An empirical study of Simplifying Models for sustainable food production. *Cognitive Linguistics*, 22(3), 459-490. doi:10.2989/16073614.2010.519102
- Kok, G., Peters, G. J. Y., Kessels, L. T., Ten Hoor, G. A., & Ruiters, R. A. (2018). Ignoring theory and misinterpreting evidence: The false belief in fear appeals. *Health Psychology Review*, 12(2), 111-125. doi:10.1080/17437199.2017.1415767
- Lakoff, G. (1987). The death of dead metaphor. *Metaphor and Symbol*, 2(2), 143-147. doi:10.1207/s15327868ms0202_5
- Lakoff, G. (1996/2003). *Moral Politics: How Liberals and Conservatives Think*. Chicago, IL: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1980/2003). *Metaphors We Live By*. Chicago, IL: University of Chicago Press.
- Lipsey, M.W., & Wilson, D.B. (2001). *Practical Meta-Analysis*. Thousand Oaks, CA: Sage.

- Moses, J.F. & Gonzales, M.H. (2015). Strong candidate, nurturant candidate: Moral language in presidential television advertisements. *Political Psychology*, 36(4), 379–397.
doi:10.1111/pops.12160.
- Musolff, A. (2017). Metaphor, irony and sarcasm in public discourse. *Journal of Pragmatics*, 109, 95-104. doi:10.1016/j.pragma.2016.12.010
- Nature Editors (2019). Editorial: It's time to talk about ditching statistical significance. *Nature*, 567, 283. doi:10.1038/d41586-019-00874-8.
- Nerlich, B., & Koteyko, N. (2010). Carbon gold rush and carbon cowboys: A new chapter in green mythology?. *Environmental Communication*, 4(1), 37-53.
doi:10.1080/17524030903522389
- Nielsen, S.B. (2019). Making a glance an action: Doctors' quick looks at their desk-top computer screens. *Journal of Pragmatics*, 142, 62-74.
doi:10.1016/j.pragma.2018.12.021
- Norrick, N.R., & Spitz, A. (2008). Humor as a resource for mitigating conflict in interaction. *Journal of Pragmatics*, 40(10), 1661-1686.
doi:10.1016/j.pragma.2007.12.001
- Norris, J.M., & Ortega, L. (2007). The future of research synthesis in applied linguistics: Beyond art or science. *TESOL Quarterly*, 41(4), 805-815. doi:10.1002/j.1545-7249.2007.tb00105.x
- Ohl, J.J., Pfister, D.S., Nader, M. & Griffin, D. (2013). Lakoff's Theory of Moral Reasoning in presidential campaign advertisements, 1952–2012. *Communication Studies*, 64(5), 488–507. doi:10.1080/10510974.2013.832340.
- Pérez-Sobrino, P., Littlemore, J. & Houghton, D. (in press). The role of figurative complexity in the comprehension and appreciation of advertisements. *Applied Linguistics*.
doi:10.1093/applin/amy039

- Prior, M.T. (in press). The interactional dynamics of scaling and contrast in accounts of interpersonal conflict. *Journal of Pragmatics*. doi:10.1016/j.pragma.2018.11.020
- Rákosi, C. (2018). Dealing with the conflicting results of psycholinguistic experiments: How to resolve them with the help of statistical meta-analysis. *Journal of Psycholinguistic Research*, 47(4), 777-801. doi:10.1007/s10936-018-9558-7
- Renardel de Lavalette, K.Y.R., Steen, G. J., & Burgers, C. (in press). How to identify moral language in presidential speeches: A comparison between a social-psychological and a metaphorical-words framing to corpus analysis. *Corpus Linguistics and Linguistic Theory*. doi:10.1515/cllt-2016-0007
- Reuchamps, M., Dodeigne, J., & Perrez, J. (2018). Changing your political mind: The impact of a metaphor on citizens' representations and preferences for federalism. *Regional & Federal Studies*, 28(2), 151-175. doi:10.1080/13597566.2018.1433663
- Semino, E., Demjen, Z., & Demmen, J. (2018). An integrated approach to metaphor and framing in cognition, discourse, and practice, with an application to metaphors for cancer. *Applied Linguistics*, 39(5), 625-645. doi:10.1093/applin/amw028
- Semino, E., Demjén, Z., Demmen, J., Koller, V., Payne, S., Hardie, A., & Rayson, P. (2017). The online use of violence and journey metaphors by patients with cancer, as compared with health professionals: A mixed methods study. *BMJ Supportive & Palliative Care*, 7(1), 60-66. doi:10.1136/bmjspcare-2014-000785
- Sierra, S. (in press). Linguistic and ethnic media stereotypes in everyday talk: Humor and identity construction among friends. *Journal of Pragmatics*. doi:10.1016/j.pragma.2018.09.007
- Sopory, P., & Dillard, J.P. (2002). The persuasive effects of metaphor: A meta-analysis. *Human Communication Research*, 28(3), 382-419. doi:10.1111/j.1468-2958.2002.tb00813.x

- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, *211*(4481), 453-458. doi:10.1126/science.7455683
- Van Stee, S.K. (2018). Meta-analysis of the persuasive effects of metaphorical vs. literal messages. *Communication Studies*, *69*(5), 545-566.
doi:10.1080/10510974.2018.1457553
- Verdonschot, L. (2018, December 21). Ruttes tere vaasje is zo kitsch, dat past bij een partij die kunst al jaren belachelijk maakt [Rutte's fragile vase is so kitsch; that fits with a party that has been mocking art for years]. Retrieved on 8 March 2019 from <https://revu.nl/columns/ruttes-tere-vaasje-is-zo-kitsch-dat-past-bij-een-partij-die-kunst-al-jaren-belachelijk-maakt>.
- Verschueren, J. (2012). The pragmatic perspective. In *The Handbook of Pragmatics, Volume 16*. doi:10.1075/hop.16.prag
- VVD (2019, March 7). Tussen Kunst en Vaas met Mark Rutte en Erica Terpstra [Between Art and Vase with Mark Rutte and Erica Terpstra; campaign commercial]. Retrieved on 8 March 2019 from <https://www.vvd.nl/nieuws/tussen-kunst-en-vaas-met-mark-rutte-en-erica-terpstra/>.

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