THEORISTS' AND PRACTITIONERS' SPATIAL METAPHORS FOR ARGUMENTATION: A CORPUS-BASED APPROACH

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RÉSUMÉ

Cet article propose une comparaison des métaphores spatiales désignant des concepts argumentatifs lorsqu'elles sont utilisées par des théoriciens d'une part, et par des locuteurs « ordinaires » d'autre part, dans quatre corpus distincts. Les théoriciens et les locuteurs ordinaires ont en commun quelques métaphores – en particulier, « point » et « base ». La façon dont ils utilisent d'autres métaphores spatiales témoigne de différences quant à leurs préoccupations et perspectives respectives. Les métaphores des théoriciens cherchent à rendre compte des relations entre les différentes composantes d'une argumentation (par exemple, la façon dont une prémisse étaye une conclusion, ou dont une conclusion découle d'une prémisse). A l'inverse, les métaphores mobilisées par les locuteurs ordinaires traduisent la relation que les locuteurs entretiennent à leur propre argumentation, et entretiennent entre eux (par exemple, un locuteur prend une position ou soutient la position d'un autre). Ces préoccupations différentes suggèrent que théoriciens et locuteurs ordinaires auraient beaucoup à apprendre les uns des autres.

ABSTRACT

We compare spatial metaphors for argumentation used by theorists with those used by practitioners as represented in discourse collected in four diverse corpora. Theorists and practitioners share a few metaphors — most notably, POINT and BASE. Their use of other spatial metaphors, however, suggest substantial differences in interests and focus. Theorists' metaphors are concerned with relationships among an argument's parts (e.g., the way a premise SUPPORTS a conclusion, or a conclusion FOLLOWS from a premise). Practitioners' metaphors by contrast express the relationships of speakers to their arguments and each other (e.g., a speaker takes a POSITION, or SUPPORTS the position of another). These differences in focus suggest that theorists and practitioners do have much to learn through dialogue with each other.

1. INTRODUCTION

In this study, we aim to contribute to three growing bodies of literature within argumentation theory: those placing practitioners' ordinary conceptualizations of argumentation into dialogue with the expert views of academic theorists; those using conceptual metaphors as a point of entry into argumentation theory; and those adopting empirical, corpus-based methods for exploring concepts. Let us consider each of these literatures in turn.

As has been noted by heretofore separate research traditions in France and the United States, ordinary argumentative discourse is saturated with metadiscursive commentary speakers use to achieve their communicative purposes and to manage their interactions (Craig, 1999; Plantin, 1996). Practitioners of argumentation – most of whom have never received training in argumentation theory – are able nevertheless to use words like "argument" (Doury, 2008; Goodwin, 2007; Plantin, 1996), "issue" (Craig & Tracy, 2005; Goodwin, 2002) and so on, as well as to develop often sophisticated analyses of the type and soundness of the argumentative moves being picked out by these words (Doury, 2004). As Christian Plantin and Robert Craig have both explained, such metadiscourse expresses practitioners' partial, "proto-theories" of argumentation, proto-theories which deserve closer study by academic argumentation theorists.

Most basically, practitioners' conceptualizations are worth our attention because they guide practitioners' production of and response to argumentation (Doury, 2004). Even a thoroughly descriptive approach to argumentative discourse thus requires a careful examination of the norms-in-use in specific contexts. More ambitiously, we can note that both theorists and practitioners benefit from a dialogue between them. Practitioners' conceptions provide a useful counterweight to theorists' ideal models, contributing a deeper sense of what is actually occurring in the rich, complex and inventive ordinary practice of argumentation (Doury, 2004, 2008). Theorists' conceptions, in return, provide finer-grained and better grounded assessments of argumentation in practice (compare Craig, 2005), as well as improve argumentation pedagogy (Goodwin, 2005). Finally and perhaps most radically, recognition of practitioners' proto-theories help close the "*abyss* between ordinary and expert practices" (Plantin, 2002), and lead us to recognize instead a theory/practice *continuum* (Craig, 1996). In this view, both theorists and practitioners are pursuing, with different emphases, the reflective practice of the practical art of argumentation. The argumentation theorist's task is to articulate, systematize, ground, and critique ordinary conceptions of argumentation; to make theory out of proto-theory. The discourse of argumentation theory may appear partially abstracted from practice, but it remains at base no more than an elaborated metadiscourse – a

set of conceptions selected from among the complex possibilities already partially explicit in ordinary argumentation (Plantin, 1996).

Exploration of systematic metaphors for argumentation provides a useful approach to the study of practitioners' conceptions of their activities. "Conceptual metaphors", such as most notoriously (in English) ARGU-MENT IS WAR, are evident in a variety of expressions in ordinary discourse, e.g. when speakers talk of "defending arguments" or "winning debates" (Lakoff & Johnson, 1980). In such expressions, one domain (WAR) is selected because it captures a speaker's understanding of another domain (ARGUMENT); the metaphor helps the speaker "render [a] situation more amenable to the simultaneous apprehension of multiple relations and the manipulation of these relations" (Quinn, 1991). Several previous studies have examined systematic metaphors in order to uncover the conceptions of argumentation that they communicate (Blair, 2007; Cattani, 2005; Goodwin, 2002; Hansen, 2007). In this study, we focus on spatial metaphors for argumentation in particular. Spatial metaphors, as we will show, are pervasive in ordinary discourse; they have also been exploited by theorists, as in the topoi ("places" of argument) of classical rhetoric, or Toulmin's conception of "argument field" (1958). Spatial metaphors thus provide a useful point of entry for a comparison between academic argumentation theory and practitioners' metadiscourse.

Argumentation theorists are of course native speakers of a language, as well equipped as any to give voice to the resonances implicit in a systematic metaphor. However, as theorists, as long as we rely only on our own linguistic intuitions we are unlikely to fully confront the potential otherness of practitioners' proto-theories; we are unlikely to be surprised. Thus as Doury has pointed out we need to go beyond lexicographical studies to examine the meanings of metadiscursive expressions in ordinary discourse (Doury, 2008). The tools of corpus linguistics provide one approach to this task. Corpus study facilitates the identification of expression meanings by looking at the occurrence of those expressions in natural contexts rather than relying on perception or intuitions on how words are used (Biber, Conrad, & Reppen, 1998). Our study therefore follows recent calls for an improved empirical grounding of analyses of metaphors (Condit et al., 2002; Eubanks, 1999), as well as adds to the growing body of work on large corpora of argumentative discourse (Coffin, 2007; Goodwin, 2007).

In sum: in this study, we take the spatial metaphors used by argumentation theorists as the target expressions, and compare them with their use in practitioners' discourse in large corpora of discourse from a variety of registers. We look for frequencies of use and patterns of use as indicators of convergence or divergence between practitioners' and theorists' conceptions of argumentation. We ask:

1. What spatial metaphors for argumentation are used by theorists?

2. How salient are these metaphors in practitioners' discourse?

3. How are practitioners' uses of these metaphors similar to and different from theorists' uses?

2. METHOD

We began by identifying the target set of spatial metaphors used by argumentation theorists. Works defining "argument" or laying out a basic model of argument were selected from three scholars who have made deliberate use of such metaphors:

1. Toulmin, *The Uses of Argument* (1958), chapter 3: "The Layout of Arguments".

2. Jackson (1992) on "disagreement space".

3. Johnson (2000b) on "argumentative space", supplemented with his more extended discussion of his conception of argument in chapter 6 of *Manifest Rationality* (2000a).

In addition, we included two textbooks from different traditions of teaching argument skills in North American universities:

1. Govier (2005), chapter 1, "What Is An Argument?", from the informal logic tradition in philosophy departments.

2. Rieke, Sillars & Peterson (2009), chapter 6, "The Nature of Arguments", from the debate tradition in communication departments.

Each article or chapter was examined for metaphorical language conceptualizing argument in spatial expressions, broadly construed. Such metaphors speak of an argument or an aspect of an argument as an object which is located in space, spread over an area, oriented up or down with respect to an imagined vertical axis, near to or far from other objects, or moving towards or away from something.

In order to establish the frequency of these spatial expressions in ordinary argumentative discourse, we conducted searches in corpora from four quite different registers:

- "S": a section of the Santa Barbara Corpus of Spoken American English (SBCSE), a collection of texts transcribed from everyday conversation (Dubois, Chafe, & Thompson, 2000); 59 texts with 241,957 words.

- "M": a group of oral discourses in a university milieu from the Michigan Corpus of Academic Spoken English, MICASE (Simpson, Briggs, Ovens, & Swales, 1999); 49 texts with 556,273 words.

- "C": a set of speeches in the US Congress debating entry into the first Gulf War (Goodwin, 2007); 489 texts with 809,132 words.

- "H": a section of the CCC, a corpus of research articles from history journals published in the United States (Cortes, 2004); 96 texts with 1,006,635 words.

The Congress and History corpora could be expected to include argumentative discourse by highly skilled practitioners. The SBCSE, by contrast, would reflect argumentation as it occurs in everyday conversation, while MICASE is mixed, including both more and less formal discourse.

The first step was to identify all the forms of the targeted spatial metaphors in the corpora. For this purpose, we used concordancing software: Monoconc Pro (Barlow, 2002) and Antconc (Anthony, 2007). All the derivations of the target expressions were identified using wildcards (the lemma of the head of the expression) and the concordancing lines were saved in text files. We identified the raw frequencies in which these expressions occurred in each corpus and we stored them in a database. The second step was to identify the examples in which the target expressions were used to express or describe features of argumentation. This was defined broadly to include the target expression used in relation to anything that could have a propositional content; for example, instances of "follow" associated with "suggestion, policy, advice, example, orders", or instances of "basis" associated with "philosophy, comparison, theory, distinction, estimates". Where the concordance contained more than 500 instances of any target expression, only a sample was analyzed. This process was conducted manually by the first author. All the non-argumentative examples were discarded and new frequencies were calculated. Finally, these frequencies were normalized for each corpus, to ensure reliability in the comparison. Normalization is a calculation used to adjust raw frequency counts from corpora of different sizes to conduct reliable comparisons (Biber et al., 1998).

3. THEORISTS' SPATIAL METAPHORS

The following spatial metaphors for argument are found in the discourse of argumentation theorists:

- Toulmin: BACKING; BASE; BASIS; FIELD; FOUNDATION; GROUND/S; STARTING POINT; STEP; SUPPORT.

- Jackson: DEFEND; SPACE; STANDPOINT.

- Johnson: CENTER; DEFEND; FOLLOW; GROUNDS; LEAD; LINE; MOVE/S; POSITION; PUT FORWARD/FORTH; SPACE; SUPPORT.

- Govier: BACK UP; BASE; BASIS; DIRECTION; FOLLOW; GROUND; POSITION; SUPPORT.

- Rieke, Sillars & Peterson: ADVANCE; BACKING; BACK UP; BASE; BASIS; BUILD; GROUNDS; MOVEMENT; PLACE; POINT; REST; STARTING POINT; STEP; SUPPORT; UNDERLIE.

These systematic metaphors appear to fall into five main clusters, most of which have been noted in previous treatments of metaphors for argumentation, reasoning, and communication.

1. *Area metaphors*: Toulmin's (1958) well-known argument FIELDS, and the more recent proposals by Johnson and Jackson of disagreement/argumentative SPACE emphasize an entire area, domain or territory of argumentation. This metaphoric cluster seems to be especially attractive to philosophers, who have an independent tradition of speaking of a "space of reasons" (e.g., McDowell, 1995).

2. *Motion metaphors*: As Hicks (2007) found in his study of several hundred newspaper editorials, "reasoning as motion along a path" is another major metaphoric cluster in English (see also Sweetser, 1992). In the theorists' discourse, motion metaphors emphasize the MOVEMENT that occurs from an argument's premises to its conclusion – a movement expressed in Toulmin's argument diagrams by the arrow pointing from left to right. In this conceptualization, an argument is a STEP taken from a STARTING POINT (i.e., a premise, or Toulmin's "grounds"). The premise LEADS to the conclusion, and the conclusion FOLLOWS from the premise. An argument thus has a certain DIRECTION.

3. *Support metaphors*: This metaphoric cluster, also noted in Hicks' work, relies on our basic sense that gravity pulls things down, so that an argument needs SUPPORT to stay up – a conception expressed in Toulmin's argument diagrams by vertical lines up from propositions which provide "backing" for others. As Blair (2007) has noted, where area metaphors focus on the relationships between arguments, support metaphors focus on the relationships "within" an argument, between its components. A conclusion is BASED on, BUILT on, or RESTS on its premises. The premises in turn UNDERLIE and thus BACK UP the conclusion, providing the GROUND/S, FOUNDATION, BASIS or BACKING for it.

4. *Interaction metaphors*: These metaphors focus not on the relationship of premises to conclusions, but on the relationship of the speakers to their arguments and to each other. Following Semino's corpus-based study (2005), we can see these metaphors for argumentation as related to a more general "conceptualization of spoken communication in terms of a physical space containing entities corresponding to the interactants, their speech acts, their utterances/texts, their views/ideas, and so on. Within this space", Semino notes, "interactants can move... toward or away from other participants,... can be positioned in different ways in relation to each other,…[and] can come into physical contact with each other in different ways". In theorists' discourse, we thus find the speaker characterized as taking a POSITION (his STANDPOINT), and PUTTING FORWARD/FORTH his argument, ADVANCING it to his auditors. A speaker may also be required to DEFEND this POSITION against the doubts or objections his auditors make against it.

5. *Indeterminate metaphors*: These metaphors use spatial terminology of a general and ambiguous nature which might in particular uses fall into any of the previous categories. Using somewhat geometrical vocabulary, an argument may be a POINT, occur in a certain PLACE, have a CENTER and run in a LINE.

4. PRACTITIONERS' USE OF SPATIAL METAPHORS

The results of the concordancing of the four practitioners' corpora are presented in the appendix. Since the results are normalized to represent the number of tokens of each metaphor per one million words, the columns are comparable. Note that in several cases practitioners are using same meta-phorical expressions as theorists, but in different senses; this will be discussed further below.

Several of the theorists' metaphors were virtually absent in all four corpora. In particular, BACKING, SPACE and STANDPOINT would appear to be technical terms that have not yet been taken up by ordinary discourse. FIELD is a metaphor which is being used by practitioners to refer to "FIELDS of expertise/study", such as "German film, environmental history, economics". The extent to which Toulmin's argument FIELDS can be identified with academic disciplines is of course a disputed matter within argumentation studies (Eemeren, Grootendorst, & Snoeck Henkemans, 1996), so practitioners and theorists may or may not be sharing a metaphor in this case.

By contrast, two metaphors were used by both theorists and practitioners in all four corpora: POINT and BASE. These two metaphors therefore seem to express the most salient conceptionalizations of argument among

American speakers of English. Practitioners and theorists appear to be most aligned in using the metaphor BASE to conceptualize the relationship between conclusions and premises. In fact, while use of technical terms such as "premise, conclusion, inference" and indeed "argument" itself are relatively rare, they do show up collocated with BASE in all corpora; for example:

> *not a good* reason *to* base *your decision (S)*
> based *on that* argument *we're going to claim (M)*
> based *on this* evidence *(M)*
> *We come to the* conclusion based *on a number of facts (C)*
> *these strategies -- and many others in between -- are* based *upon the* premise *(C)*
> *the persuasiveness of* arguments based *on individual experience (H)*
> *Or was the traveler's* inference based *on an apparent absence of activity (H)*

Although less frequent, two other support metaphors – BASIS and SUPPORT – also reflect conceptualizations of argument shared by theorists and practitioners.

By contrast, practitioners' use of POINT appears to signal interests different from those of theorists. Practitioners do echo theorists in using POINT to refer to the premises of an argument, as in the phrases "starting point, point of departure" and "case in point". But that is not the only way they use this term. In the corpora, POINT also commonly picks out a salient conclusion a speaker is asserting, often to evaluate it as "good, fundamental, telling, important, strongest, key, critical", etc. A speaker can have several POINTS, and another of the key uses of the metaphor is to identify which of his own or another's POINTS a speaker is addressing – the "first, third, last, latter" and so on. In yet another use, POINT appears to refer to an entire argument, something that is "made" or "elaborated". Finally, POINT can mean issue – the "point of contention" or "in dispute". In sum, practitioners use POINT to pick out entire complexes of reasoning in a flexible fashion, collapsing – or at least failing to make – the distinctions theorists draw between functionally different aspects of those complexes.

Practitioners' lack of interest in focusing on premise/conclusion links is also reflected in the paucity of motion and support metaphors in all but the History corpus. In the conversations of the SBCSE and MICASE corpora and the speeches of the Congress corpus, we rarely find talk of taking a STEP or MOVING in a DIRECTION from premises to conclusions; in fact, the only relatively frequent motion metaphor is START, which is primarily found as part of STARTING POINT. An expression of the relationship of one proposition as LEADING/FOLLOWING another is also relatively

infrequent. Similarly for the support metaphors: BUILD, FOUNDATION, REST and UNDERLIE are present, but not common.

It is worth noting, however, that several of these metaphors actually are frequent in practitioners' discourse. Instead of being used to refer to relationships between proposition and proposition, they are used to refer to relationships between persons and propositions. Compare the following three types of use of FOLLOW and LEAD, for example:

[1] *this clear clause in the Constitution, can lead to only one clear and unambiguous conclusion (C)*
so it doesn't quite follow but that's more or less true (M)

[2] *It is this concern which has led me to come to the conclusions I have (C)*
I follow on the work that has already been done (H)

[3] *In his memoir, Rusk argued that both "policy exigencies" and the "rightness of the cause" led him to throw the full weight of the State Department behind the administration's civil rights programs (H)*
religious people are making the, laws you know they're going to follow their convictions they, would be, unethical not to follow their convictions (M)

In instances of type [1], practitioners are using the FOLLOW/LEAD metaphors in a way that is similar to the way argumentation theorists use it, i.e., to identify the premises that are LEADING to and the conclusions that are FOLLOWING from. Many times more frequently, however, practitioners use FOLLOW/LEAD metaphors to talk about the propositions they themselves (type [2]) or others (type [3]) are FOLLOWING or being LEAD by. The focus in [2] and [3] is on the compelling force propositions (or advice, suggestions, policies, facts, threats, etc.) have on the beliefs and actions of agents including individuals, groups, and nations. The dominance of these uses suggests that practitioners are uninterested in abstracting the propositions from their immediate conversational contexts.

We find a similar pattern with several of the support metaphors: BACK UP, GROUND and SUPPORT.

[1] *we have enough material to back up the things that I am about to say with cites (C)*
the thesis of a single line of human development was grounded in the premise (H)
conflicting pieces of information like maybe s- one thing will support the use of noisy-or, and one thing won't support the use of noisy-or (M)

[2] *Do we back up American policy, the American President (C)*

we were on shaky grounds (S)
we found congenial common ground in the conclusion (H)
in order for me to like make or support policies or whatever (M)

[3] *he had the religious this religious debate, where he, claimed the high*
ground the orthodox ground (M)
President Bush and Secretary of State Baker have shifted ground (C)
her greatest legacy will always be her unwavering support for equal
rights for all regardless of race and sex (M)

With the exception of the GROUND metaphor, instances of types [2] and [3] are again more frequent than instances of type [1]. Practitioners appear to be more interested in where speakers (themselves and others) are standing than on how propositions are resting on each other.

Further evidence of the same interest can be found in the frequency of the POSITION metaphor, especially in the more openly argumentative Congress and History corpora. This metaphor is used in particular to track speakers' interactions with each other – the relationships among their positions.

Echoing a position taken by Michael Mugger (H)
deputies supporting the position of the more moderate Feuillet Club
(H)
contradicted Augustine's position (H)
British anthropologist Jack Goody takes a countervailing position. He
argues that (H)
those who are now opposing our position, (C)

The CENTER metaphor is commonly used in a similar way, to identify the focus of the "debate, controversy, contest, difference", or "disagreement" among speakers – i.e., the issue being argued. In addition to tracking the relationship among speakers, practitioners also use the POSITION metaphor to note the conversational work needed to "take" a POSITION – to "adopt, assert, lay out, maintain", or "shape" it. In particular, POSITION is often used, especially in the Congress corpus, in the course of the speaker's effort to ensure that his POSITION is "clear" to his auditors.

In sum, the spatial metaphors tracked in this study suggest that theorists and practitioners are attending to different aspects of the complex activity that is argumentation. Theorists use spatial metaphors of motion and support to identify and assess relationships between propositions "within" an argument. Practitioners use some of the same metaphors, as well as some metaphors of interaction, to identify and assess relationships among speakers, and between speakers and their arguments. As a final piece of evidence in support of this conclusion, it is interesting to note that academic discourse may be acting as a sort of way station between practitioners' and theorists' interests. The History corpus of scholarly articles exhibits the

widest range of spatial metaphors, and also (with a few exceptions) the most frequent use of each of them. In particular, it is only in the History corpus that we find the spatial metaphors LEAD and GROUND used with any frequency to express premise/conclusion relationships. By contrast, the History corpus includes fewer instances than the Congress corpus of the POSITION and SUPPORT metaphors to express a speaker's commitments.

The MICASE corpus of oral discourse in a university setting reinforces this view. For example, the only uses of START to identify the premises of an argument outside of the phrase STARTING POINT occur in the MICASE corpus, in discourse from what appears to be a discussion among philosophy students:

> *is it I think it's pa- i think it's, the same as saying, like if you start your argument with, in logic P and not P, then you can prove, just using the laws of logic if you start with a contradiction, you can prove anything you want. so it, if you start with//*
> *yeah but you can't run into the (xx) axiom, (uttering a) contradiction//....*
> *but you guys you guys the argument is about a contradiction it's not like I'm using a contradiction to prove an argument about a non-contradiction. but I mean you're saying, you're saying that, s- start with, start with something, that doesn't//*
> *but you're stating, you're starting with, a contradiction (M)*

In the MICASE corpus we also find a speaker mixing two uses of the SUPPORT metaphor in the same utterance:

> *and then in the conclusion we could say we either supported this or we didn't support, like our findings support or they don't support, um what we our hypothesis what we thought (M)*

Here we may be observing a transition in process from a focus on features of the interaction ("we... supported... what we thought"), to focus on features of the argument abstracted from the interaction ("our findings support... our hypothesis").

5. CONCLUSION

Based on the evidence of spatial metaphors in ordinary argumentative discourse, it appears that practitioners have to go to school to begin to pay attention to the fine structure of the arguments they are making. Practitioners do speak of themselves as making points which are based on some evidence or reasoning. The POINT metaphor, however, seems to be deployed flexibly to capture everything from the narrow focus of force an argument exerts on a given conversational context to the broad complex of discourse which creates that force. The use of the POINT metaphor by ordinary practitioners

deserves further investigation. Meanwhile, our study supports the tentative conclusion that a practitioner's sense of making points does not fully align with the theorist's understanding of the inferential steps from premises to conclusions (to use a motion metaphor), or the scaffolding such premises are providing (to use a support metaphor).

This is not to say that theorists' views are not useful; quite the contrary, explicit theorizing of these aspects of argumentation likely emerged in part because close attention to argument structure makes a vital contribution to sophisticated argumentative practice. Recognizing the gap between practitioners' and theorists' conceptions, however, should allow us (among other things) to better understand some of the challenges of teaching argumentation. For many students, argument analysis may not be a natural language.

Our results suggest that argumentation theorists may also have to "go to school". Our study shows that practitioners are attending to the positions speakers have supported and the reasoning they are following, identifying the common ground as well as the points of contention which lie at the center of a debate. The practitioners' use of these interaction metaphors suggests that they are engaging in some sort of sophisticated "scorekeeping" during the argumentative exchange, keeping track of who has committed themselves to what. Further investigation would be required to confirm whether practitioners are using additional spatial metaphors or other forms of argumentative metadiscourse to manage this scorekeeping. Meanwhile, argumentation theorists should make it a priority to examine the methods practitioners are using in the midst of their interactions to create, manage, and exploit their own and others' commitments, extending research such as the formal dialectics developed by Krabbe (Walton & Krabbe, 1995) and the more empirically oriented studies of Kauffeld (Kauffeld, 2002, 2009) and Tseronis (2007). Such research will undoubtedly provide further opportunities to continue the dialogue between argumentation theorists and practitioners on the practical art of argumentation.

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**APPENDIX: SPATIAL METAPHORS FOR ARGUMENTATION:
COUNTS NORMED TO PER MILLION WORDS**

		SBCSE	MICASE	Congress	History
Area Metaphors					
FIELD		4	34	15	131
SPACE		0	2	0	1
Motion Metaphors					
DIRECTION		0	0	2	2
FOLLOW	c follows from p	0	2	4	10
LEAD	p leads to c	4	2	6	25
MOVE		0	0	0	6
START		0	27	0	8
STEP		0	2	0	1
Support Metaphors					
BACK UP	p backs up c	0	0	1	0
BACKING		0	0	0	0
BASE		49	115	89	170
BASIS		4	29	51	99
BUILD		8	5	4	22
FOUNDATION		0	5	4	14
GROUND	p grounds for c	0	2	15	77
REST		0	9	4	18
SUPPORT	p supports c	0	27	31	53
UNDERLIE		0	3	2	11
Interaction Metaphors					
ADVANCE		0	0	0	18
DEFEND		0	3	11	41
POSITION		8	11	257	93
PUT FORWARD		0	2	8	6
STANDPOINT		0	0	0	0
FOLLOW	person follows p	4	20	95	121
BACK UP	person backs up c	0	2	25	0
GROUND	person's ground	4	9	9	8
LEAD	p leads person	0	9	35	97
SUPPORT	person supports c	0	14	982	111
Indeterminate Metaphors					
CENTER		8	0	10	9
LINE		0	0	1	11
PLACE		0	0	1	4
POINT		136	264	324	155