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The persistence of space: formalizing the polysemy of spatial relations in functional elements

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The persistence of space

Formalizing the polysemy of spatial relations in functional elements

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Introduction

In this dissertation I address the question how humans conceptualize abstract relations by analyzing the expression of such relations in natural language. I propose semantic-pragmatic formalisms that capture the kind of polysemy in (1):

(1) a. *Frightened by the guests, the cat fled **out of** the room.*
b. *The cat fled from the room **out of** fear for the guests.*

In (1a), *out of* expresses a spatial relation between *the cat* and *the room*, namely that the cat moved along a path starting in the room and ending outside of it. In (1b), *out of* does not express such a spatial relation. Instead, it expresses a causal relation, whereby the action of *the cat* is the result of *fear for the guests*. The preposition *out of* is polysemous between marking a Source in the spatial domain and marking a Cause in the causal domain. This particular polysemy pattern is very common cross-linguistically, so it is probably not accidental. It is more likely that speakers somehow conceptualize the abstract causal relation with cognitive primitives that are also used to conceptualize spatial relations. I thus argue that aspects of the original spatial meaning do not bleach away but persist in extensions to other domains.

It has long been recognized that many abstract relations are expressed in spatial terms, and within cognitive linguistics this is taken as evidence that spatial representation is somehow primary. However, descriptions of the extension of spatial terms to abstract domains are often given in an intuitionist manner, without explaining how a particular abstract meaning can be *derived* from a spatial meaning. To form a clearer picture of the way spatial representation structures the way we conceptualize abstract relations, we need a constrained theory of the way space is represented and how abstract domains can build on this. This dissertation therefore investigates (a) what kind of spatial notions can be extended to other, abstract domains and (b) what determines their interpretation in these domains. It does so

by offering concrete, formal semantic-pragmatic analyses of these types of polysemy.

In order to obtain a comprehensive picture of the way spatial notions are extended to other domains, this dissertation is not limited to well-known cases of extensions, such as to the temporal domain. Instead, I focus on the following three types of domains: (a) causal relations, (b) relations of speakers to information content, and (c) relations between people. My claim is that all these relations are conceptualized in spatial terms. While I study causal and social relations by means of prepositions, I look at the way information content is positioned in space through the lens of demonstratives and complementizers. The fact that spatial meaning persists in even these highly grammaticalized items provides further evidence for the claim that space is a crucial primitive of human cognition.

Each polysemy pattern is studied in at least two unrelated languages, drawing examples primarily from English, Romance, and Biblical Hebrew. Appendix A provides the reader unfamiliar with Hebrew with the necessary background to work their way through the interlinear examples. Chapters 1 and 3 are primarily based on French and English, respectively.

Of course, the central question of the cognitive conceptualization of abstract relations cannot be answered in the scope of a single dissertation. Nevertheless, I hope that the case studies presented here can convince the reader that this research program has potential, and that the theoretical proposals can serve as a starting point for further investigation.

The chapters of this dissertation are divided into three parts according to the type of abstract relation they discuss. Part I looks at spatial-causal polysemy. Chapter 1 develops a formal model for such polysemy in prepositions, taking Agent phrases in French passives with *de* 'from, by' and *par* 'through, by' as an example. Chapter 2 applies the same model to causal adjuncts introduced by מִן *min* 'from' and בְּ *bə* 'in' in Biblical Hebrew.

Part II is concerned with the use of spatial notions to express relations between speakers and information content. Chapter 3 looks at the English demonstrative and complementizer *that* and explains how the [+distal] feature of the original demonstrative function still plays a role in its use as a complementizer. In chapter 4 the same model is applied to Biblical Hebrew כִּי *kī*, a clausal connective with a plethora of different uses.

Part III, which consists only of chapter 5, considers how spatial terms are used to express relations between people. In particular, it discusses Biblical Hebrew לִפְנֵי *lipnē* 'to the face of' and its English translation 'before', which can both be used to refer to someone's authority or dignity.

Finally, chapter 6 summarizes the main findings.

All main chapters are based on independent articles. As such, there are minor inconsistencies in terminology and assumed background between them. Where needed, I have made slight changes to make the work accessible to a wider audience here. However, I have kept these changes to a minimum so as not to confuse readers with two significantly different versions.

Abbreviations

Glossing abbreviations

1	First person
2	Second person
3	Third person
ALL	Allative
CAUS	Causative Aktionsart (see appendix A.2)
COMP	Complementizer
DU	Dual
F	Feminine
FUT	Future
IMP	Imperative
INF	Infinitive
INFABS	Infinitive absolute, various functions (see appendix A.2)
IPFV	Imperfective (in Biblical Hebrew the prefix conjugation with various meanings; see appendix A.2)
JUSS	Jussive
M	Masculine
MID	Middle voice (niphal template; see appendix A.2)
N	Neuter
NEG	Negation
NOM	Nominative
OBJ	Object marker or pronominal suffix with object function
PASS	Passive voice (see appendix A.2)
PFV	Perfective (in Biblical Hebrew the suffix conjugation with various meanings; see appendix A.2)
PL	Plural
PLURACT	Pluractional Aktionsart (see appendix A.2)
PRS	Present tense

PST	Past tense
PTCP	Participle
Q	Question marker
REFL	Reflexive voice
REL	Relativizer
SG	Singular
WAYQ	*Wayyiqṭol*, narrative sequential simple past (see appendix A.2)
WQAT	*Wəqăṭal*, a sequential modal form (see appendix A.2)

Technical abbreviations

Adj	Adjective
Adv	Adverb
C	Complementizer
CP	Complementizer Phrase
DP	Determiner Phrase
NP	Noun Phrase
PP	Prepositional Phrase
QUD	Question Under Discussion
VoiceP	Voice Phrase
VP	Verb Phrase
*v*P	Little *v* (light verb) Phrase

Abbreviations of Bible translations

ASV	American Standard Version
CSB	Christian Standard Bible
ESV	English Standard Version
KJV	King James Version
NASB	New American Standard Bible
NET	New English Translation
NIV	New International Version
NKJV	New King James Version
NLT	New Living Translation
RSV	Revised Standard Version