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Introduction

Humans, like all living beings, live and orient themselves in three dimensional space. The perception and mental evaluation of spatial relations is accordingly an essential capability of human cognition. Closely connected to this conception is a question significant to linguistic disciplines, namely, the connection between human language capability and other cognitive abilities.

In this controversially debated research domain, the perception and conceptualization of space, and in particular the static and dynamic spatial relations between objects, is a productive area of investigation. The current state of knowledge suggests that on the basis of common biological sensory systems, the human perception of space is driven by universally-applicable principles of signal processing and interpretation. This leads one to hypothesize that universal spatial concepts are to be found in human language (Landau & Jackendoff 1993). Concurrently, however, researchers from language typology and cognitive linguistics have voiced the opinion that the human conceptualization of spatial relations is also affected by cultural factors. Numerous studies demonstrate how these cultural factors are apparent in the morphosyntactic and semantic organization of language systems (see, for example, Talmy 1985, 2000; Brown 1994; Bloom, Peterson, Nadel & Garret 1996; Levinson 2003, Levinson & Meira 2003, Levinson & Wilkins 2006; Slobin 2004; Hickmann & Stéphane 2006; Brala 2007; Aurnague, Hickmann & Vieu 2007). This research domain concerns itself particularly with the semantic-conceptual aspects of spatial relations and raises two main questions. The first addresses the semantics of closed classes, most particularly adpositions, and the second concerns lexical fields within open classes, such as verbs of motion and location. In the past, researchers tended to assume that all languages exhibit universal semantic structures when describing the spatial domain. At this point, however, one must ask if, and if so, how universal concepts or structuring principles can be determined, which form the basis of the culturally-specific realization of spatial terms in individual languages.

Simultaneously, the attention of research has been focused on the fact that the codification of spatial relations is for the most part not concentrated in a single component of a linguistic expression — for example the preposition *auf* in the German topological expression *Der Kaffee steht auf dem Tisch* (cf. ex. 1 below) — but instead is distributed across a series of clausal elements, each of which denotes only one aspect of the spatial situation being described. For instance, in the above example not only the semantics of the preposition but also its case government and the semantics of the verb are essential to the

interpretation of the clause, as is particularly evident in comparison with the clause *Er stellt den Kaffee auf den Tisch* (cf. ex. 2 and Werning, this vol., §2).

(1) di: ˈtasə **ʃte**:t ˈ**a͡ufn̩** tɪʃ
Die Tasse **steh**-t **auf** d**em** Tisch.
the:F.SG.NOM cup(F)[SG] **stand**:PRS-3SG **VERTICAL_ON** the:M.SG.**DAT** table(M)[SG.**DAT**]
'The cup is (*lit.* stands) on the table.'

(2) əːɐ̯ **ʃtɛl**t di: ˈtasə ˈ**a͡ufn̩** tɪʃ
Er **stell**-t die Tasse **auf** d**en** Tisch.
3SG.M.NOM put.**standing**:PRS-3SG the:F.SG.**ACC** cup(M)[SG] **VERTICAL_ON** the:M.SG.**ACC** table(M)[SG.**ACC**]
'He puts the cup on the table.'

Also relevant to comprehension is non-linguistic knowledge, which comprises functions and features of objects and the impact of gravity (among others Coventry & Garrod 2004). In consideration of this, interesting questions present themselves concerning the semantics of each element and the interaction of these elements in both the linguistic expression and on the pragmatic level, both of which merit further research.

The volume presented here approaches these questions from the perspective of ancient languages of the Mediterranean region and came into being within the framework of the research group C-I-1 of the Excellence Cluster Topoi. The Research Area C investigates the perception and representation of space in the various symbolic systems of ancient cultures. Research questions include the culturally-specific as well as culturally-shared perceptions, conceptualizations and representations of space. Within this broader structure, the Research Group C-I has been considering particularly the ways and means of designating spaces, spatial properties and spatial relations between objects in language systems and in text. These questions are approached from the standpoint of linguistics, by concentrating on the available grammatical and lexical means in each language, as well as from the point of view offered by literary theory, by focusing on the creation of spaces in literary texts.

The Research Group C-I-1 is the linguistically-oriented graduate group of Research Group C-I, whose nucleus in the first phase of Topoi funding consisted of six doctoral students and four postdoctoral researchers as well as numerous research fellows funded for short term research stays within the Group C-I-1. During this first phase of funding, the

central focus was the linguistic codification of spatial configurations and the conceptualization of spatial relations in the ancient languages under analysis. The group consisted of members from the areas of Egyptology, Ancient Near Eastern Studies and Classical Philology as well as general linguistics. The ancient languages represented by the group were Ancient Egyptian (including Coptic), Akkadian, Ancient Greek, Hittite, Hurrian, Latin, and Syriac. In regular group meetings, the members of C-I-1 discussed individual research outcomes and relevant linguistic theories and methods. The intensity of this regular exchange and the resulting transdisciplinary cooperation led to a level of productivity that far exceeded initial expectations.

As well as individual analyses, a key aim of the C-I-1 graduate group was to productively utilize a broad spectrum of genetically- and typologically-divergent languages. It was thus necessary to overcome the comprehension problems inherent to interdisciplinary research. To this end, a meta-language was developed, in other words, a common terminology derived from linguistics as well as a method established within general linguistics of interlinear glossing of the language data. The glossing method had to be adapted in order to reflect the specific requirements of languages recorded only in the written mode.

From the beginning of the research collaboration of Group C-I-1 onwards, the intention was to present the respective research questions and provisional outcomes of individual research projects in a group setting. This measure was taken in order to facilitate mutual feedback and to discuss similarities and differences in the linguistic subsystems under analysis, and in this way to adapt and utilize contemporary research approaches, questions, theories and methods from the general linguistic disciplines like language typology and language universals research as well as cognitive linguistics.

It was concomitantly a goal to make individual research outcomes accessible not only to specialists of the respective disciplines but also to a broader public interested in linguistics, who possess no specific knowledge of particular ancient languages and who concern themselves principally with the broader transdisciplinary conclusions rather than with the philologically-driven conclusions of individual studies.

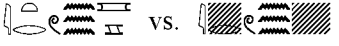
With this volume, the Topoi Research Group C-I-1 *The Conception of Spaces in Language* presents a substantial portion of the findings of some of its members. The contributions in this volume, on spatial language in Ancient Egyptian, Akkadian, Hittite as well as Ancient to Modern Greek, are principally the result of regular and inspiring seminars and discussion groups offered by Silvia Kutscher, Jan Stenger and Frank Kammerzell, in which the contributors to this volume, i.e. Cyril Brosch (Hittite), Thanasis Georgakopoulos (Ancient Greek), Tatiana Nikitina (Ancient Greek), Marianna Spano (Ancient Greek), Ulrike Steinert (Akkadian), Jan Stenger (Ancient Greek), Daniel Werning (Ancient Egyptian), as well as several other researchers of the C-I-1 research group were actively involved. Of particular note here are Camilla Di Biase-Dyson (Ancient Egyptian), Johanna Fabricius (Latin), Linda Meini (Latin), Sebastian Fischer (Hurrian) and Eliese-Sophia Lincke (Coptic).

Outside of this book, the research outcomes of several members of Group C-I-1 have been and will be published both in numerous articles as well as monographs, the latter, amongst others, as part of the series *Topoi. Berlin Studies of the Ancient World.*

This volume, on the basis of its descriptive studies, offers data to this point not easily accessible to linguistic research. The individual contributions on spatial communicative acts in ancient languages will hopefully be of use to the construction of linguistic theories and in general contribute to spatial knowledge. Similarly, it could be argued that the engagement with these languages, many of which are extremely well-attested from a diachronic perspective, also provides an important contribution to diachronic-semantic investigations, as both a testing ground and as a complement to hypotheses pertaining to language acquisition and typology.

Consequently, these contributions tread new ground in two different ways: both methodically and in terms of content, by its treatment of the ancient data and by its engagement with linguistic theories. Firstly, in terms of the presentation of the ancient text witnesses, it must be noted that some ancient philological disciplines have long been based on traditional and often idiosyncratic practices of transcription and transliteration (for instance Egyptology, Akkadian Cuneiform studies, Hittitology). These traditional methods of transcription are for the most part not easily compatible with the standards of modern linguistic interlinear glossing. In other ancient philological disciplines, transcriptions are generally uncommon (for example Ancient Greek Studies and Latin Studies). Further problems can also develop. For instance, we could take issue with the fact that the individual philological systems use traditional terms for grammatical categories which do not correspond well to the modern definitions of these categories or which are not used outside the individual discipline. This categorization problem can potentially lead to misunderstandings by non-specialists (for example, in respect of terms like "Aorist", "Perfective", "Pseudo-participle", or "Ventive"; see, for example, Werning 2008).

Additional problems arise because the transliteration of manuscripts written in dead languages must often encode, through markings, the extent of preservation or other textual features; cf., for example,



	vs.	
jtrw		*j[t]rw*
river(M)[SG]		river(M)[SG]
'the river'		'the river'.

A particular challenge arises from the glossing of Ancient Egyptian, in which the written forms — comparable with writing conventions in Arabic and Hebrew — widely omit vowels. Consequently, the glossing should outline morphological features, which are actually not recorded in the writing itself, but are rather inferred from syntactic considerations (cf. Werning, this vol., end of §3). On the other hand, it is the case, as much for

Egyptian as for the languages written in cuneiform, that the written mode contributes semantic and grammatical information in the form of classifiers, which are not part of the spoken language.

	Hieroglyphic Egyptian	**Akkadian Cuneiform**
		
Sign gloss	ʕ–t–ROOM(CL)–PL(CL)	sum–HERBS(CL)
Reconstructed phonology	/ʕV:t/	/ʃu:mu:/
Traditional transcription	$^{c}.t^{pr.P}$ (rarely ever used)	SUM^{SAR}
Traditional transliteration	$^{c}.(w)t$	*šūmū*
Transliteration in this volume	^{c}*:t*	SUM^{SAR}(*šūmū*)
Linguistic gloss	chamber:F:PL	garlic:M.PL.NOM^{herbs}
	'(a/the) chamber'	'garlic'.

Early on, the research group began developing a compatible common language based on practical guidelines from interlinear glossing (see, for example, Di Biase-Dyson, Kammerzell & Werning 2009). That this practice, which is established as a standard in general linguistics, has also gained ground in ancient philological disciplines is certainly an important achievement of this transdisciplinary research group.

The second innovation encapsulated in the contributions to this volume is the attempt to adapt linguistic methods and approaches, which were principally developed as cognitive linguistically- and language typologically-oriented research on modern spoken languages, to the analysis of languages exclusively transmitted by writing. In this way, we hope to enrich General Linguistic research by providing contributions that have been prepared in such a way as to facilitate comprehension by non-specialists. The great challenge in this respect is to make the findings based on ancient language data comparable with those of languages still spoken today. This happens — alongside the aforementioned adoption of linguistic glossing standards — in particular through the inclusion of theoretical approaches and methods, which recently have been developed in general linguistics in order to address the questions particular to spatial language research.

Notable examples here are firstly the groundbreaking work of Talmy (1985, 2000) on the various lexicalization patterns of motion expressions and the concomitant lively debate in research circles, which have been approached in the contributions of Cyril Brosch and Jan Stenger. Secondly, the numerous insights from grammaticalization research into spatial relators, which played a significant role in group discussions, are in this volume a focal point of the contributions by Thanasis Georgakopoulos as well as Marianna Spano & Tatiana Nikitina. The third line of research, provided by the Language & Cognition Group of the Max-Planck-Institute in Nijmegen, had particular impact on the group. Of significant import were the elicitation strategies developed by Melissa Bowerman and Eric Pederson, whose visual stimuli allowed the researcher to analyze the ways of expressing typological

relations, known as the *Topological Relations Picture Series* (Bowerman & Pederson 1992). Such a method was implemented in the contributions by Cyril Brosch, Ulrike Steinert and Daniel Werning as a *tertium comparationis*. Whereas the language consultant of a modern language would be confronted with representation of spatial relations which serve to elicit spontaneously-produced language data in order to describe topological relations, the application of this procedure is naturally not viable for the investigation of ancient languages. The way in which the procedure can productively be modified and thereby turn into a fruitful method for linguistic studies of ancient languages has been demonstrated by the detailed discussions in the contributions of Ulrike Steinert and Daniel Werning.

All contributions tread new ground also with respect to content. Principally, they allow an expansion of the temporal span of spatial linguistics into the past — in part up to circa 4500 years (Egyptian, Akkadian). Generally, the languages treated here are each early representatives of the Indo-European (Hittite, Ancient Greek) and Afro-Asiatic (Egyptian, Akkadian) language families respectively. In this way, the contributions test general linguistic hypotheses that have been based on modern languages with ancient language data. It is hoped that the research projects of Group C-I-1 offer a promising outlook for future diachronically-oriented spatial linguistic studies.

As for the individual contributions:

In his contribution *Räumlichkeit in Zentralanatolien: Eine hethitische „Grammar of Space"*, **Cyril Brosch** offers a synthesis of the Hittite means of describing local relations, particularly the Old- and Middle Hittite stages, on the grounds that in the transition of one of these stages to the other, a substantial change in the system of spatial expressions is evident. One of the features of this study is a productive engagement with cognitive linguistic and typologically-oriented approaches. In the first part of his discussion, Brosch offers a description of the inventory of local expressions for topological relations, frames-of-reference and motion in space. In the second part, he analyses his data with respect to their basic spatial concepts and organizes the results typologically. It is particularly in the area of expressions of topological relations and the lexicalization patterns of verbs of motion the Hittite language displays phenomena which contribute to an elaboration of our knowledge of world languages.

While the article above offered us an overview of a whole system of local expressions of Hittite, **Thanasis Georgakopoulos**, in his article *On the encoding of* ALLATIVE *and* RECIPIENT *in the Greek diachrony*, focuses on a single element pertaining to the Greek language, namely the preposition *eis* and its diachronic development from Homeric to late Medieval Greek (8th c. BCE–16th c. CE). Oriented around the model of Cognitive Grammar, Thanasis Georgakopoulos clarifies the semantic development of the preposition *eis* from a purely allative meaning to a polysemy, consisting of allative meaning on the one hand and a recipient-oriented meaning on the other hand. In this way, the article investigates the mechanisms which motivate this development. In a further step, the findings are organized