

# Introduction Spatial case

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## 1. Introduction

This special issue is concerned with the expression of spatial meaning by morphological case.<sup>1</sup> Spatial meaning is generally considered to be basic to our thinking in general. In addition to philosophical arguments, this assumption has been made on the basis of the widespread use of spatial language for non-spatial purposes. In fact, it is one of the most frequently used sources in grammaticalization patterns (Heine and Kuteva 2002). The most well-known examples are from the temporal domain, in which, for example, spatial ‘in’ is used for temporal meaning. (e.g., *in the winter*) or past tense is expressed by source markers (e.g., French *je viens de manger* ‘I’ve just eaten’, literally: ‘I come from eating’). But there are many more examples of the grammaticalization of spatial language, such as the marking of possession, verbal arguments, purpose, and causality (cf. the contribution to this issue by Diana Forker).

Morphological case has been studied for thousands of years starting with the ancient Greek and Roman tradition for the Western world and with Pāṇini’s grammar of Sanskrit for the Indian linguistic tradition (Butt 2006). Notwithstanding this long history, there is still no generally accepted view of case. Most people will agree with Blake’s (1994: 1) definition of its core use, *viz.* a system of marking of dependent nouns for the type of relationship they bear to their heads. However, what kind of marking counts as case marking and what kind of relationships should be distinguished are still hotly debated issues. Probably precisely because of its intangibility, morphological case is central to many theories of language.

Our special issue on spatial case brings these two extremely interesting topics, spatial meaning and morphological case, together. However, spatial case is not only interesting for just being the intersection of space and case, its study may also shed new light on both domains of linguistic theorizing as we feel that they have been studied rather one-sidedly.

Table 1. *The study of case and space*

	Marker	
	Case	Lexical means
Domain		
Structural	<b>a</b>	b
Semantic (Spatial)	c	<b>d</b>

## 2. A full picture

Case can be used structurally, to mark argument structure, and nonstructurally, to mark semantic roles. Most work on case acknowledges this distinction between structural and nonstructural case, and then often continues to study only the former (cf. Butt 2006). Similarly, it is generally accepted that spatial meaning can be expressed by morphological case or more lexical markers like prepositions, after which most studies concentrate on the more lexical means. This is illustrated in Table 1, in which boldface stands for well-studied.<sup>2</sup>

But when we limit ourselves to the study of structural case (cell *a*) and the lexical expression of space (cell *d*), we will never know whether a certain generalization is due to form or function. A possible example of a phenomenon that has been wrongly attributed according to Aristar (1996, 1997) is the animacy hierarchy. This hierarchy is often seen as a general cognitive universal that may or may not become apparent in the grammar of languages. In the case domain, the hierarchy motivates the phenomenon of *differential case marking*, in which humans behave differently with respect to case marking from nonhumans (cf. Aissen 2003; de Swart 2007; de Hoop and Malchukov 2007). However, according to Aristar, this particular hierarchy only applies to the structural use of case, the animacy hierarchy really being a markedness hierarchy for predicate arguments. Spatial cases may develop different markedness hierarchies that are not simply the inverse picture of the animacy hierarchy. That is, marked arguments are not necessarily typically locations, although the latter are typically low in animacy. Thus, Aristar argues, the real principle at work concerns the markedness of the combination of role and filler, not animacy per se.

Similarly, in the spatial domain, most studies considered configurational meaning aspects only, probably because of the focus on lexical means. However, for spatial *case*, directionality seems to be of greater importance.

### 3. Configuration and directionality

The location in space of objects by spatial case is relational: it involves other objects. Talmy (1975) proposes the notions *figure* and *ground* for disambiguation. To communicate the location of a figure, we make use of grounds, i.e., referent objects whose position is evident. The precise relation between these two objects in space, e.g., AT, IN, ON, UNDER, etc., is the domain of *configuration* (or *place function* in the terminology of Jackendoff [1983]). Jackendoff (1983) distinguishes between this configuration dimension and that of *directionality* (the *path function*, in his terminology). The ontology of *directionality* differs can be described in spatial terms only, as a sequence of positions in space (e.g., Zwarts 2008), with reference to event time (e.g., Kracht 2002), or by the spatial application of an abstract change feature (Fong 1997). In all these accounts, however, directionality involves a change.

There are many other aspects of spatial meaning, that are sometimes expressed by spatial case as well (e.g., the difference between proximate and distal cases in Tsez; Comrie and Polinsky [1998]). However, such distinctions only seem to be made after the expression of configuration and directionality (Creissels 2009). According to Lestrade (in prep.; cf. also Creissels 2009; Stolz 1992) spatial case primarily expresses directionality; configuration distinctions are secondary. This preference is explained by grammaticalization principles. Following common insights of grammaticalization studies, case is seen as a marker that is both semantically and formally bleached because of its frequent use. The most frequent elements of spatial meaning are the first candidates to develop case forms. Lestrade argues that the number of configuration distinctions that can be made is much bigger than the number of directionality distinctions. Under the assumption that both dimensions are always present in a spatial expression, the choices of directionality are necessarily more frequently used than those of configuration. Because of their smaller class size, the different directionality options are more frequently used, and therefore more likely to develop case markers, whereas only the most basic levels of configuration are expected to develop case markers, and only after directionality (cf. the contributions of Zwarts and Ganenkov to this issue). Indeed, whereas most work on spatial meaning is considered with the more lexical spatial constructions and focuses on configurational meaning only, several contributions to this special issue are concerned with directionality (cf. the papers by Zwarts, Pantcheva, and Forker).

Stolz (1992) zooms in on directionality even further, arguing that in some languages the expression of Source meaning by spatial case implies the expression of Goal, and therefore that the concept of Goal is more basic than that of Source. Such a preference is also known from research on language acquisition. Lakusta and Landau (2005) show that learners of English often omit

Source but not Goal meaning. These findings could be translated into a general cognitive preference for Goal over Source directionality.

#### 4. Basic configuration distinctions

This special issue begins with the interaction between directionality and configuration. Joost Zwarts establishes a hierarchy of configuration distinctions by looking at the way in which directionality is encoded with respect to the different configuration levels. For this purpose, he first develops a hierarchy of directionality marking. He distinguishes six types of marking: *suppletion* (e.g., *via* for the combination of Route directionality and In), *marking* (e.g., *into* for Goal directionality and In), *projection* (e.g., *from under* for Source and Under), *Government* (e.g., German *in* combining with accusative case to express Goal meaning and with dative case to express Place: *in die<sub>ACC</sub> Stadt* ‘into the city’ vs. *in der<sub>DAT</sub> Stadt* ‘in the city’), *reordering* (e.g., Dutch *in* used prepositionally to express Place and postpositionally to express Goal: *in de stad* ‘in the city’ vs. *de stad in* ‘into the city’), and, finally, *identity* (no difference in marking between different levels of directionality, e.g., *under the bridge* having both a Route and Place reading). These different options can be ordered according to their strength, which is a combination of the overtness of the marking of directionality and the integration of the marker of configuration. In order of presentation, suppletion is the strongest encoding strategy, identity the weakest.

The hierarchy of encoding strategies can be used to compare the strength of encoding for different configuration levels. For example, the different directionality levels of *at* in English are marked via suppletion (*from, to, via*), whereas those of *under* are marked via projection and identity ([*from*] *under*). By comparing the encoding of directionality of different languages, Zwarts establishes the following configuration hierarchy:

- (1) AT < IN, ON < UNDER < BEHIND < FRONT

Configuration levels high up in this configuration hierarchy are more strongly marked for directionality than those down in the hierarchy.

Dmitry Ganenkov focuses on some of these basic configuration distinctions in Nakh-Daghestanian languages. His goal is to contribute to the larger project of the crosslinguistic investigation of the semantics of the spatial domain. Although the expression of configurational distinctions in itself seems to be a universal of language and cognition, the kind of relations that are discerned is subject to considerable variation and simple surface universals are hard to find (Levinson and Wilkins 2006: 526). The discussion of Nakh-Daghestanian

languages is interesting because of the distinctive richness of their nominal paradigms.

Ganenkov argues that there are three semantic oppositions underlying the system of configuration markers for IN, ON, and NEAR in Nakh-Daghestanian. These are the distinction between hollow containers and substances for IN, the opposition between a vertical and horizontal ground for ON, and the difference between simple empirical and conceptual closeness. Conceptual closeness concerns the complete spatial layout in which different salient objects need to be taken in consideration, not only the properties of the ground.

The way in which these oppositions surface differs between languages. First, a language can neglect a given opposition, for example not distinguishing support by tables from support by walls. Second, a language can apply an opposition categorically, in a classifying strategy, for example having different IN markers for water and for rooms. Finally, a language can use a distinction “semantically”. This is illustrated for IN in (2).

(2) Aqusha Dargwa

- a. *ʁum-li-zi-r*                      *GarGu-bi*    *ler*.  
 sand-OBL-INTER-ESS    stone-PL    be  
 ‘There are stones in the sand.’
- b. *ʁum-la-r*    *daqal*    *GarGu-bi*    *ler*.  
 sand-IN-ESS    many    stone-PL    be  
 ‘There are a lot of stones in the sand.’

The choice between the intercessive and incessive case in (2) is not dependent on the type of ground (which would be the case in the classifying strategy), but is used for a subtle meaning distinction. In (2a) a simple location of stones in sand is meant, while in (2b) a property of the ground is meant: the sand contains a lot of stones and therefore is not suitable for particular purposes.

Thus, Ganenkov shows how even in closely related languages the same general distinctions can manifest themselves quite differently.

## 5. A reanalysis of directionality

Marina Pantcheva accounts for the common phenomenon of syncretism between Place and Goal directionality. Given the three directionality levels Place, Goal, and Source, there are various ways languages can encode them.

- (3) a. Place ≠ Goal ≠ Source  
 b. Place = Goal = Source  
 c. Place = Goal ≠ Source

- d. Place = Source ≠ Goal
- e. Place ≠ Source = Goal

Of all possible encoding patterns given in (3), only the first three are encountered in Pantcheva's typological language sample. It is hard to see why the syncretism between Source and Place is absent if directionality is just the application of a path function with, amongst others, the options Goal and Source, as proposed by Jackendoff (1983) and discussed above. Therefore, Pantcheva refines this standard view that is assumed in many approaches. She argues that a Source function is built on top of a Goal function, that takes a Place function in turn.

#### (4) Source [Goal [Place]]

In Pantcheva's account, the function of Source is to reverse or negate the orientation of the phase transition that Goal expresses. Goal directionality concerns a change from not being in some configuration to being in this configuration. Applying Source to Goal says that the change is from (not) being in some configuration to not being in this configuration.

In addition to typological evidence, Pantcheva uses morphological decomposition to say that Source applies to Goal, as illustrated by the following example:

#### (5) Quechua

- a. *Kay nʷan-ga ayakuco-man rin-n.*  
this road-TOP Ayacucho-ALL go-3SG  
'This road goes to Ayacucho.'
  - b. *May-manta-s chay runa ka-n-man?*  
where-ABL-REP this man be-3SG COND  
'Where could this man be from?'
- (Pantcheva this issue: Ex. 8)

The Goal marker is the simple morpheme *-man*. The Source marker is morphologically complex adding the morpheme *-ta* to the Goal morpheme.

Using a set of pragmatic and wellformedness principles, Pantcheva shows how under her analysis the possible syncretism pattern between Place and Source is impossible, thereby correctly accounting for the variation attested.

## 6. Extensions of spatial meaning

Going beyond the basic use of spatial case, Diana Forker discusses the non-spatial use of spatial markers in Tsezic languages, a subbranch of the Nakh-Daghestanian family. According to Heine and Kuteva (2002: 5), the use of

forms of concrete concepts for more abstract functions seems to be a general language strategy. Blake (1994) and Harris and Campbell (1995) argue that frequent forms seem more likely to develop or acquire more general functions in the course of their lives. Tsezic, famous for its rich spatial case inventories, is an interesting language branch to look into for the nonspatial use of spatial case.

In addition to more standard extensions like the expression of temporal meaning and possession, spatial cases are shown to mark arguments of verbs of speech, perception, and other psychological constructions, purpose, and nonfinite verbs with various subordinate functions. For example, in the Hinuq sentence in (6), the *-go* marker, otherwise used for the AT configuration, is used to mark the potential agent.

- (6) Hinuq  
*Di-go bule b-u-l-o gom.*  
 I.OBL-AT house III-make-POT-PRS be.NEG  
 ‘I cannot build a/the house.’

Forker shows that the bulk of nonspatial work is taken on by the combination of the configuration marker for AT and the directionality markers for Source and Goal. For example, the Goal meaning can metaphorically be extended to encode abstract orientation of objects to beneficiaries and recipients, or purpose. In line with Blake (1994) and Harris and Campbell (1995), Forker concludes that the less specific the spatial meaning of a marker is, the more grammatical functions it has.

## 7. Spatial meaning in sign language

Finally, Asli Özyürek, Inge Zwitserlood, and Pamela Perniss discuss the strategies available in Turkish Sign Language (TİD) to encode the relation between figure and ground, comparing it with the spatial systems of spoken and other sign languages. Different from spoken languages, the visual-spatial modality of signed languages allows simultaneous and three-dimensional spatial structuring of information. Due to this conflation of space and language, spatial expressions in signed languages seem to be more iconic than in spoken languages. Sign languages often have more abstract lexical items for spatial relations, but generally speakers prefer the richer direct analogue representation.

It has been claimed that in all sign languages the ground precedes the figure as being the first to be introduced in sign space. After the subsequent introduction of the figure, the spatial relation between the two is expressed by a simultaneous classifier predicate construction. This is illustrated in the following example.

## (7) Canonical spatial construction in sign languages:

[ground NP][localization of ground]-----hold-----  
 [figure NP] [localization of figure]

Özyürek et al. show that TID does not always conform to this canonical structure. Most prominently, although the canonical order of introduction and localization of first ground, then figure, is also present in the TID data, figure and ground are not expressed simultaneously. This seems to be more likely for default spatial relations between figure and ground than for unexpected relations. As such, this seems to be due to the very similar economy principles that govern the choice between lexical and grammatical spatial constructions in spoken languages (Lestrade in prep.)

Importantly, Özyürek et al. show that the data from TID suggests that there is more variation in spatial constructions in sign languages than has often been assumed.

## 8. Conclusion

To truly understand the function of case or the way in which we deal with spatial meaning, we think it is necessary to take into consideration nonstructural uses of case and more grammatical expressions of spatial meaning. In this larger enterprise, we are mostly concerned with elaborating on cell *c* of Table 1, that is, with spatial case. The contributions to this special issue are an important step toward getting the full picture of morphological case and spatial meaning. However, our main interest is in the latter, whence the excursion to the expression of spatial meaning in sign language in one of the contributions (namely, Özyürek et al. this issue).

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## Notes

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2. Although we believe it is fair to say that most work on spatial meaning focused on lexical means, there are a number of exceptions, most notably, the work of Kracht (2000) on spatial



case and the work of the MPI research group of Stephen Levinson on spatial meaning (Levinson 2003; Levinson and Wilkins 2006).

## References

- Aissen, Judith. 2003. Differential object marking: Iconicity versus economy. *Natural Language and Linguistic Theory* 21. 435–483.
- Aristar, Anthony R. 1996. The relationship between dative and locative: Kuryłowicz's argument from a typological perspective. *Diachronica* XIII(2). 207–224.
- Aristar, Anthony R. 1997. Marking and hierarchy. types and the grammaticalization of case markers. *Studies in Language* 21(2). 313–368.
- Blake, Barry J. 2001 [1994]. *Case*, 2nd edn. Cambridge: Cambridge University Press.
- Butt, Miriam. 2006. *Theories of case*. Cambridge: Cambridge University Press.
- Comrie, Bernard & Maria Polinsky. 1998. The great Daghestanian case hoax. In Anna Siewierska & Jae J. Song (eds.), *Case, typology and grammar*, 95–114. Amsterdam & Philadelphia: John Benjamins.
- Creissels, Denis. 2009. Spatial cases. In Andrej Malchukov & Andrew Spencer (eds.), *The Oxford handbook of case*. Oxford: Oxford University Press.
- Fong, Vivienne. 1997. *The order of things: What directional locatives denote*. Stanford, CA: Stanford University dissertation.
- Harris, Alice C. & Lyle Campbell. 1995. Historical syntax in cross-linguistic perspective. Cambridge: Cambridge University Press.
- Heine, Bernd & Tania Kuteva. 2002. *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.
- de Hoop, Helen & Andrej Malchukov. 2007. On fluid differential case marking: A bidirectional OT approach. *Lingua* 117. 1636–1656.
- Jackendoff, Ray. 1983. *Semantics and cognition*. Cambridge, MA: MIT Press.
- Kracht, Marcus. 2002. On the semantics of locatives. *Linguistics and Philosophy* 25(2). 175–232.
- Lakusta, Laura & Barbara Landau. 2005. Starting at the end: The importance of goals in spatial language. *Cognition* 96. 1–33.
- Lestrade, Sander. In prep. *The space of case*. Nijmegen: Radboud University Nijmegen dissertation.
- Levinson, Stephen C. 2003. *Space in language and cognition: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.
- Levinson, Stephen C. & David Wilkins (eds.). 2006. *Grammars of space: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.
- Stolz, Thomas. 1992. *Lokalkasussysteme: Aspekte einer strukturellen*. Wilhelmsfeld: Gottfried Egert.
- de Swart, Peter. 2007. *Cross-linguistic variation in object marking*. Nijmegen: Radboud University Nijmegen dissertation.
- Talmy, Leonard. 1975. Semantics and syntax of motion. In John P. Kimball (ed.), *Syntax and semantics*, 181–238. New York & London: Academic Press.
- Zwarts, Joost. 2008. Aspects of a typology of direction. In Susan Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 79–106. Amsterdam & Philadelphia: John Benjamins.