Lexical Splits and Asymmetries Spatial Referencing:
Revealing Universals through the Study of Variation

TATIANA NIKITINA
Department of Languages and Cultures of Sub-Saharan Africa
Centre National de la Recherche Scientifique (CNRS)
Email: tavnik@gmail.com

Introduction
Early studies in the linguistic representation of space were commonly inspired by bewildering cross-linguistic diversity; they sought to systematize that diversity and to understand its underlying principles. The theoretical fruitfulness of these efforts notwithstanding, much stands to be gained by looking closely at patterns of variation that recur with surprising regularity in language after language but have not so far received much attention from typologists. In this paper, I explore three of the major aspects of cross-linguistic variation, focusing on the ways alternative strategies co-exist within one language. I believe that by shifting the emphasis from sweeping typologies to language-internal variation new insight can be gained into the way different cognitive strategies compete for becoming conventionalized in grammar and usage. In addition to traditional typological methods, such exploration requires the use of corpora, experimental techniques, and sometimes tools for fine-grained quantitative data analysis. In this talk I try to highlight the way general principles of spatial representation are reflected, in different languages, in lexical asymmetries, usage tendencies, and regularities in language change.

Overt encoding vs. contextual inference
One important dimension along which systems of spatial representation vary across languages is the extent of relying on overt encoding of directionality as opposed to leaving it to be inferred from context. In the study of motion expressions, that variation has been related most famously to the distinctions between verb-framed and satellite-framed languages, on the one hand, and Manner and Path languages, on the other (Talmy 1975, 1985; Levin et al. 2010). Individual languages, however, rarely restrict their motion expressions to just one strategy, and speakers are often offered a choice between overt vs. implicit encoding. The alternatives are illustrated by the variation between explicitly dynamic and static prepositional phrases in (1a,b), for English and Russian, and in (2a,b) for Ancient Greek.

(1) a. Put it into / in the box. [US English]
   “Put the keys onto / on the table.”

(2) a. hò d’ en purì bálle ovdís [Ancient Greek; Il. 9.220]
   he:NOM PRT in fire:DAT throw:IMPF.3SG offerings:ACC
   “and he threw sacrificial offerings in the fire”

   b. kai tês oreias anthemorruton gános ksouthês melissés and
   ART mountainous:GEN flowing.from.flowers:ACC pride:ACC yellow:GEN bee:GEN
   puràn baló sèthen [Ancient Greek; Eur. IT 634-635]
   into fire:ACC throw:FUT.1SG you:GEN
“and I will throw into your funeral pyre the honey of tawny mountain bees that streams from flowers.”

In spite of a number of superficial differences, the variation seems to be constrained by the same factors in all three languages. One of the most important factors is manner specificity of the verb, as reflected in corpus distributions in English (Nikitina 2008), and in patterns of diachronic change in Ancient Greek and Russian (Nikitina 2012; Nikitina & Maslov 2013). Manner specificity is ultimately related to the probability of inferring the directional meaning in context. With verbs describing specific manners, and especially manners that represent highly unusual ways of getting to a new location (e.g., waltzing or crawling), Goals of motion are normally marked overtly.

The same probability of inferring the argument’s meaning is reflected in a different way in lexical restrictions on combinations of verbs and spatial adpositions with Source and Goal arguments (Nikitina 2009). In Wan (Mande), most motion verbs can only take one argument, and that argument can only describe the Source or the Goal of motion depending on the verb (cf. 4a vs. b). Several verbs, however, show flexibility in combining with either a Source or a Goal, and do not restrict their locative argument to any particular role (5).

(4)   a. è go-kal ɛ gő “She went from / *to the forest.”
    b. è ba-kal ɛ gő “She fell from the forest.”

The verb’s behavior can be predicted based on one particular aspect of the verb’s meaning: flexible role assignment is only allowed with verbs that describe asymmetric motion events, such as events of vertical motion (the Goal of motion must be located lower on the gravitational axis than its Source) or events of deictic motion (the Goal of motion is closer to the deictic center than its Source). The entailed asymmetries make it easier to infer the role of the particular locative argument: in (3b), with a verb of vertical motion, the particular location can only serve as the Goal of motion, and in (3a), it is likely its Source. Probability of inferring directional meaning is reflected in tendencies for overt Goal marking in English and in “rigid” associations between the verb’s meaning and its argument structure in Wan.

**Static relators vs. dynamic projections**

Another dimension along which languages vary is the extent to which dynamic descriptions are used to encode static spatial relations. English makes limited use of such expressions in this function (6a), but ancient Indo-European languages used them more regularly, cf. the Goal and the Source expressions in (6b,c), from Ancient Greek. (6) a. A big storage chest stood to the left of the door. (The British National Corpus)

b. hoi tō epi deksiā tôn kefalēōn
   they:NOM ART:ACC.PL on right:ACC ART:GEN.PL heads:GEN
   komōsi, tā d’ ep’ aristerā keipousi (Hdt. Hist. 4.191.4)
   let.hair.grow:PRES.3PL ART:ACC.PL PRT on left:ACC shave:PRES.3PL
   “They let their hair grow long on the right side of their heads and shave the left.”
   (literally, “to the right side, “to the left”)}
The dynamic expressions describe static locations by projecting paths of fictive motion (cf. Talmy’s notion of *access path*) leading away from the Ground (in the case of Source expressions) or toward it (in the case of Goal expressions). In languages where both the static and the dynamic strategies are available, the choice between them is again constrained by the same underlying factors. For example, the use of the dynamic strategy is correlated with the overall frequency of a particular spatial relator. More frequent spatial relators tend not to allow for the dynamic marking, the latter being confined to less conventional and rarely invoked spatial relations. Best candidates for dynamic encoding are relations for which no specialized preposition is readily available (“to the north,” “to the right,” etc.).

In Indo-European languages, specialized static prepositions compete with the old strategy of relying on directional adverbs, pushing it to the periphery of the spatial domain (Nikitina forthc.). The way individual languages are affected by that change can be predicted based on the close relationship between frequency of use and the degree of grammaticalization of spatial relators as a conventional means for describing static relations.

**Frames of spatial reference**

The last dimension to be discussed is the choice of a frame of spatial reference in descriptions of objects’ location. While speakers of European languages make extensive use of the relative frame of reference, many languages have been reported to hardly allow their speakers such an option (Levinson 1996, 1997; Bohnemeyer 2011). I present an experimental study of Bashkir (Turkic), which lets its speakers choose between three reference frames where English only allows for two. In descriptions of a ball’s relation to a chair (aligned along the horizontal axis), speakers of Bashkir may either resort to the relative reference frame or choose between two different subtypes of the intrinsic frame: one based on the chair’s function (the chair’s front is where the person sitting on it would be facing), the other based on the chair’s shape (the chair’s front is its more prominent and elevated part, i.e. the part normally used to support the person’s back). The complex three-way contrast leads to multiple ambiguities and extensive inter- and intraspeaker variation in reference frame use. I explore the structure of that variation and argue that the same factors are at play as previously reported for the choice of a reference frame in other languages. In particular, that choice correlates not only with the degree to which the Ground object is functionally asymmetric, but also with the choice of a particular lexical item used to describe the spatial relation. Lexical items referring to more natural and functionally prominent asymmetries (e.g., front/back) are more likely to be associated with the function-based intrinsic reference frame than lexical items referring to less prominent and human-specific asymmetries (e.g., left/right).
Conclusion
The study of major dimensions of cross-linguistic variation at a more fine-grained level can lead to insights into the way expressions of different types co-exist within one language. The same underlying principles can be seen at work behind different instances of language-internal variation. The principles discussed in this paper suggest that (i) in encoding motion events, speakers estimate how likely directional meaning is to be inferred from context; (ii) in choosing between more and less conventional expressions, speakers are sensitive to the spatial relation’s frequency; and (iii) in choosing the reference frame, speakers pay close attention to the prominence of certain aspects of the spatial relator’s lexical meaning.

The same principles show up as relevant to speakers’ contextual preferences, seemingly categorical lexical splits, and patterns of language change. They likely reflect general principles of human spatial cognition, and interact in complex ways with the heterogeneous lexical and morphosyntactic resources that the particular language has developed.