Book Review

Katerina Stathi, *Granularity in the verbalization of events and objects*, 2023. Amsterdam: John Benjamins, pp. xviii + 536. €120.00, ISBN 9789027213822

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This study is concerned with differences in granularity, i.e. the choice between semantically general (coarse-grained) and specific (fine-grained) words, with data from 13 conceptual domains. The research question is formulated in Chapter 1 'Introduction' in a very general way: "Do languages verbalize states of affairs at a similar level of detail consistently? Is there a preferred level of detail in expressing meaning?" (p. 13). Then, Chapter 2 introduces the theoretical background, Chapter 3 describes the methodology, and each of Chapters 4–15 is devoted to one of the conceptual fields that are studied. These chapters are structured in a similar way, which makes the reading of this comprehensive work easier. The results are then summarized and theoretically discussed in Chapter 16, followed by a conclusion in Chapter 17.

The book is based on data elicited with visual stimuli. In lexical analysis, elicitation with video clips or pictures supports an analysis made from a world-to-word (Malt et al. 2010) or onomasiological (Geeraerts 2010) perspective, starting with a conceptual structure and looking at its various lexico-syntactic realizations. As I have studied several of the domains (referred to as 'semantic fields') from a semasiological perspective based on corpus data, in what follows I will compare both perspectives, which will make the review more subjective but hopefully more interesting. Corpus-linguistic methods start with examples of words – often in a sentence context – and support the study of words from a word-to-world (or semasiological) perspective. This approach makes it possible to study how the use of a certain word in a specific context is related to the complete set of uses of the word, i.e. its meaning potential.

After a review of the theoretical background (domains and fields, theories of lexicalization), a very precise version is presented of the 'granularity hypothesis' in Chapter 2 (pp. 66–67): "Satellite-framed languages (S-languages) are semantically more specific than verb-framed languages (V-languages)". The hypothesis was tested on very extensive data from four languages: English and German (S-languages), and Greek and Turkish (V-languages). The study covers 10 conceptual domains of verbs and three domains of nouns. The choice of several of the domains as well as the methodology fits in the tradition of the Language and Cognition Group

at the Max Planck Institute for Psycholinguistics in Nijmegen (e.g. studies on the events of Putting and Taking in Kopecka and Narasimhan 2012, of Cutting and Breaking in Majid and Bowerman 2007), where data were elicited with visual stimuli. Events (verbs) were illustrated with short video clips which the participants were asked to describe. Putting events, for example, were illustrated with scenes such as [Woman puts bottle in refrigerator] and [Man puts fistful of rice on table]. Elicitation of object names (nouns), for example Drinking vessels, were based on pictures of a wine glass or an espresso cup. Since it would be exceedingly demanding for individual participants to carry out the complete set of tasks (in all, 417 video clips and 98 pictures), participants were divided into groups in such a way that each stimulus was described by 20 informants in each language group. There were three such groups for each language, which means that the total number of participants was 60 per language. The hypothesis was operationalized in a precise way by specifying various measures applied to the elicited data in Chapters 2 and 3. Chapters 4–15 are respectively devoted to the 13 domains:

– *Conceptual domains of verbs*: Putting and Taking, Dressing and Undressing, Eating and Drinking, Cutting and Breaking, Hitting and Kicking, Opening and Closing, Washing, Terrestrial motion and Aqua motion
– *Conceptual domains of nouns*: Drinking vessels, Sitting objects, Clothing items

The empirical part starts in Chapter 4 with Putting and Taking events. Since each domain is dealt with in a similar way, I will take this as illustrative and will discuss this domain in greater detail. For this domain we are presented with an overview of earlier studies, a discussion of dimensions of lexical differentiation and the establishment of an ethic grid and a set of stimuli. A set of basic elements such as Figure, Ground, Path and Manner is established, and each of these is associated with a number of properties (e.g. kind of Figure: solid, granular, liquid). The set of stimuli is constructed in such a way that it illustrates such contrasts. There are 50 stimuli for putting events and 41 for taking events, the complete set for all domains being given in an appendix. The empirical results are presented in Section 4.4. A strength of the analysis is the operationalization of several different measures, which are introduced in Section 2.5.4. 'Type frequency', which shows lexical differentiation, accounts for the total number of verb types. The higher the type frequency, the higher the specificity or granularity. According to this measure, the languages can be represented as a cline from more to less differentiation: English > German > Turkish > Greek. 'Token frequency' indicates the frequency of occurrence of each type: "the higher the token frequency of a verb, the more general its meaning" (p. 127). For each conceptual domain, a table is given with the complete list of all words that are used and their token frequency. To illustrate this,

Table 1: Verbs produced to target PUT stimuli and token frequency (*n*).

German	*n*	English	*n*	Greek	*n*	Turkish	*n*
legen 'lay'	212	*put*	350	*vázo* 'put'	400	*koymak* 'put'	348
stecken 'stick'	150	*place*	219	*afíno* 'leave, let'	110	*bırakmak* 'leave, let'	119
stellen 'put standing'	147	*pour*	47	*topoθetó* 'place'	106	*atmak* 'throw'	69
schieben 'push'	39	*throw*	36	*ríxno* 'throw'	50	*sokmak* 'insert'	58
werfen 'throw'	37	*drop*	29	*petáo* 'throw'	49	*dökmek* 'pour'	47

Table 1 (based on Table 2, p. 123) shows the five most frequent verbs used by each language group to describe Putting events (rough glosses are added to ease reading).

As noted by the author, token frequency shows that one verb is more frequent than any other verbs, but the frequency of the dominant verb differs across the four languages, and in German there are three verbs that are almost equally frequent. There are also two measures of diversity: 'Type-token-frequency' (total number of types divided by the total number of tokens) and 'mean number of types per stimulus'. Although these measures are related to type frequency, they yield clines that may differ slightly from the latter. A further measure is 'Simpson's diversity index', which is used to measure homogeneity across speakers.

The patterns of categorization are visualized with figures based on multidimensional scaling. One verb dominates in all languages except German, where three clusters could be identified as corresponding to the most frequent verbs *stecken*, *stellen* and *legen* (cf. Table 1). In addition, there is a big cluster including manner verbs such as *hängen*, *streuen* 'strew, spread' and *schütten* 'pour, spill'. In English and in Greek, the most general verb (*put* and *vázo*, respectively) is compatible with most scenes, whereas the most general verb in Turkish (*koymak*) is excluded from as many as 13 (out of 47) scenes.

The discussion of categorization is followed by a section on semantic analysis, which focuses on semantic components and dimensions of lexical differentiation such as properties of the Figure and of the Ground and their spatial relationship. General dimensions such as Path, Manner and Agent are also tackled here. One aspect that is briefly discussed is the use of a field-external verb with a general meaning such as DO. It seems to me that Greek *afíno* and Turkish *bırakmak* (see Table 1 above) are examples of the use of a verb with a general meaning 'let, leave' as a verb of Putting, like Spanish *dejar* and Icelandic *láta*. A further example is the use of GIVE as a verb of Putting, especially in Austrian German, resulting from contact with neighboring Slavic languages such as Czech (Lenz et al. 2021).

The analysis systematically covers a wide variety of semantic perspectives and is based on a rigid methodology. In my view, however, it remains unclear what is regarded as a verb of Putting versus a verb of Caused motion. The choice of stimuli biases the quantitative measures in various directions in this type of studies. With stimuli such as [Man tosses book on floor] and [Woman pushes table against wall (forcefully)], a verb meaning 'throw' appears among the five most frequent verbs (see Table 1). If we restrict the discussion to Caused-motion verbs (with human agents) involving hand actions, I suggest that we must distinguish at least between verbs of Throwing, Carrying and Pulling and Pushing in English. From a methodological point of view, it may be interesting to make a comparison with corpus-based contrastive studies. Translation corpora were used to compare English and Swedish verbs of putting in Viberg (1998a), and German, French and Finnish in Viberg (2015), which focuses on the eight most frequent Putting verbs and on the semantic features that regulate their correspondence. As discussed in Viberg (2015: 243–246), there is a tendency in Germanic and Slavic languages to neutralize contrasts between some of the postural Putting verbs LAY, STAND and SET. Fenno-Ugric S-languages such as Finnish and Hungarian also use general Putting verbs. At least within this field, there is great intra-typological variance.

There is a special problem with events referred to as Taking. In English linguistics, *take* has been described as a member of the antonymous pairs *give–take* or *bring–take* (cf. the typological study by Margetts et al. 2022). Kopecka and Narasimhan (2012) introduce the pair *put–take* and regard *take* as a verb of Removal. English *take* covers all three perspectives, but this appears to be rather unusual. Without taking a definite stand between the aforementioned analyses, this verb is also problematic as regards the definition of the conceptual domain, which in its turn is decisive for the choice of stimuli. In my view, Stathi's study is biased towards classing TAKE as a verb of Removal.

With respect to Cutting and breaking (Chapter 7), I contend that *break* tends to be accidental and refer to destruction: *I broke a cup* (*when I accidentally dropped it on the floor*), whereas *cut* is typically carried out intentionally with an instrument specially devised for cutting: *I cut the bread into thin slices*. This difference is lost in the set of stimuli: "All clips show a causal Agent performing an action volitionally" (p. 209). The stimuli explore basic semantic contrasts in a systematic way, for example [Woman smashes a plate with a single blow of hammer], [Woman smashes a stick into several fragments with a blow of hammer]. Logical possibilities are systematically covered in this way and show contrasts that are possible. However, actions are carried out with a specific aim that goes beyond what is actually seen, and it is not always clear from the context what the intention is. A related problem is that it is difficult to assure that typical events or situations are covered across languages representing different cultures. In this vein, corpus-based studies detect recurring

situations. In Swedish, for example, the verb *klippa* 'cut with scissors' occurs frequently in expressions such as (with their typical English translations) *klippa sig* (lit. 'cut oneself')/*get a haircut*, *klippa gräsmattan*/*mow the lawn*, and (in specific cotexts) *klippa ett får*/*shear a sheep*. Corpus-based studies can also easily cover inchoative (*the cup broke*), stative (*the cup is broken*) situations and attributive uses (*a broken cup*). Viberg (2020) discusses the pros and cons of corpus-based and elicitation-based methods using Majid and Bowerman (2007) as an example of the latter. Recently, Cacioli and Vernillo (2023) combines both methods.

Hitting and kicking (Chapter 8) is a rather restricted domain, which justifies that the two subdomains are accounted for jointly in the book. In my view, Hitting and kicking is part of a coherent field of physical contact verbs, in which a verb meaning HIT plays a central role (to various degrees across languages), whereas KICK represents one of several more specialized meanings (see Viberg 1999). From a semasiological perspective, which should account for polysemy as well as for differentiation, HIT tends to extend into complex patterns of polysemy in Swedish and also in Persian (Family 2011), Chinese (Gao 2001) and Walpiri (Riemer 2005) – see Viberg (2016) for a review. This is parallel to Stathli's observation that there is often one central verb within a domain/field.

The study of the three conceptual domains of nouns (Chapters 13–15) follows the same model as the study of the events, except that pictures are used as stimuli. For Drinking vessels, the stimuli consist of 20 pictures representing four broad categories: GLASS, CUP, MUG and BOTTLE. Variations are introduced along five semantic dimensions: Function (*baby bottle*), Material (*plastic cup*), Shape (*mug* must be higher than wide), Size and Substance (*teacup*). For Drinking vessels, a clear difference was found between S- and V-framed languages. As for events, S-languages use more fine-grained expressions. This difference was attested also for the other two domains of nouns: Clothing items and Sitting objects but it was less pronounced. Even if the granularity hypothesis thus found support even for object nouns, it is difficult to find a causal motivation for this correlation. A more likely explanation might be that English and German are culturally and areally more closely related than the other two languages, as is the case with Greek and Turkish.

The test of the granularity hypothesis is summed up in Chapter 16, where the measure-by-measure results are scrutinized across the 13 domains. For most domains, most measures support the granularity hypothesis that S-languages are more fine-grained than V-languages. It is also possible to make comparisons within language types. German is more fine-grained than English, which is shown most clearly in the semantic analysis. On many points, differences between Greek and Turkish are also elucidated. The granularity hypothesis, which is the major topic of the study, receives strong support for the four languages tested and is backed up with a large database and a very solid analysis of the data. However, as indicated above, it

is not certain that the patterns that are found can be explained by referring to differences between S- and V-framed languages alone. Other factors may be at play, cultural (as mentioned above) and linguistic. As described in the book, German is characterized by extensive prefixing, compounding and use of separable spatial particles, the latter being related to its status as an S-language. However, verbal particles of the Germanic type are weakly developed in Finnish, which is also an S-language. The status of the granularity hypothesis in its precise form must be left open until more languages have been investigated.

Granularity in the verbalization of events and objects is a very interesting contrastive-typological comparison between four languages, and the insightful semantic analysis has a value of its own. From a methodological point of view, the combination of measures is a strong method when comparing languages. The grids on which the selection of visual stimuli are based are systematic and well-justified. Nevertheless, the selection of stimuli remains a problematic point. It is not possible to cover all possibilities, in particular those that have not been discussed in earlier research, and the proportions of various types of stimuli will affect the quantitative measures.

As mentioned, the book joins up with earlier studies based on elicitation with visual stimuli and, taken together, this research tradition has produced many interesting results concerning lexical typology and will no doubt continue to do so. Chapter 16 contains the section 'Widening the scope' and many of my comments above are seen as complementary corpus-based studies. It seems that not many researchers have been engaged in this kind of crosslinguistic lexical studies, but it is necessary to combine this approach with the one in the book to get a more complete view of lexical structure. When comparing languages, the use of visual stimuli avoids the problems of translations, which have often been used in corpus studies, and is feasible when studying languages for which large corpora do not exist. It can also be used to elicit data from second-language learners, already carried out, for example, for verbs of Putting (Cadierno et al. 2015; Lewandowski and Özçalışkan 2021; Viberg 1998b). However, visual stimuli are selected by the researcher and this introduces a bias, whereas corpora often reveal unexpected occurrences and make it possible to see the frequency of expressions in authentic data. Early corpus-based studies suffered from small corpora, but large corpora are now easily accessible. (The scarcity of spoken corpora is still a problem.) It is also difficult to use visual stimuli for abstract extensions of verbs with a concrete basic meaning and for abstract events described by verbs of Perception, Cognition and Verbal communication. In this case, corpus studies can be combined with alternative experimental studies, for example, contextualized choice tasks used in Frommherz (2022) to compare verbs of Thinking in Swedish and German.

Despite these critical remarks, the present book is an impressive work both from a methodological and from a theoretical perspective. For each conceptual domain, Stathi discusses dimensions of lexical differentiation and the semantic structure of the domain, which I find valuable for further studies of the domain. In addition, the book presents a large amount of new data that are described in such detail that they can be used in further analyses. In a nutshell, the book contains a wealth of useful information for anyone who is interested in lexical typology or contrastive lexical studies.

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