Proposed for Poster Session

Polymorphic linguistic renderings of fuzzy-scale conceptual measurement values: Mandarin "下 (xià)" vs. Spanish "poco"

keywords: cognitive quantification, fuzzy rating scales, quantification dimensions, lexical quantifiers, linguistic complexity

Scale-values with wordings such as "more" and "less" are qualified as "fuzzy" because of the uncertainty of their range. These wordings occur within a fuzzy *linguistic* scale, namely a sequence of language-driven descriptors identified with fuzzy intervals, as could be "low" and "high" in English (e.g., the first of them spanning over 1 to 6, the second, over 4 to10 on a numerical scale comprising ten degrees). We here use small capitals (i.e., LOW, HIGH) when language-independent *conceptual* values are meant, thus suggesting that such scale types, despite language-specific wordings of their values and possibly distinct segmentation according to culture, are cognitive in nature.

The values LOW and HIGH identify scale regions applicable to diverse measurement domains, hereafter termed "dimensions" (*quantity*, as in "eat a little or much", *pace*, as in "running slowly or fast", *rhythm*, as in "beating slowly or fast", *duration*, as in "reading for a short or long time", *distance*, as in "living near or far away", *frequency*, as in "travelling rarely or often", etc.). These examples of process quantification show how the same values (LOW, HIGH) materialise linguistically when ascribed to different *dimensions* (quantity, pace, distance, etc.). Both Mandarin "下 (xià)" and Spanish "poco" neutralise the dimensional reference of the LOW value pointed out above, in that they consistently denote a fuzzy segment on the feeblest magnitude zone of the dimension scale to which they apply.

Both quantifiers (see Table 1) suit several dimensions depending on context: "poco" can stand for *duration*, *quantity, distance* and *frequency*, The dimensional scope of "下" is slightly different: besides the three first foregoing ones, it can stand for *delay* (the immediacy of an action to be undertaken, the suddenty of an event), *position* (the following member of a descending-ordered sequence, the bottom or the lowest section of something, a beneath-placed entity). Polysemy occurs when either "poco" or "下" can, in the same context, refer to more than one dimension (duration / frequency, duration / distance, etc.). "下" exhibits a higher versatility in terms of word category: as "poco" it can act as an adverb, an adjective and a noun, but also as a classifier or a verb identifying a downwards movement direction. Yet, whatever their grammatical form, both consistently implement the same inferior fuzzy-scale value segment.

Polymorphism is here meant as the combination of multi-dimensional compatibility, polysemy and cross-categorial identity of lexemes expressing the same fuzzy-scale value. We intend to stress the conceptual nature of fuzzy-scale value ranges imposed onto the various dimensions over which quantification takes place. Our focus on LOW is meant to highlight the comparison between near-equivalent quantifiers instantiating one and the same segment of a generic fuzzy measurement scale in different languages (here, Mandarin and Spanish), so as to include degrees of polymorphism in the list of factors that define linguistic complexity.

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Table 1: Non-exhaustive example list

	Case	*Dimension*	*Near English Equivalent*	*Category*
Poco	Comer poco	Amount	To eat little	Adverb
	Correr poco	Distance / Duration	To run a little	Adverb
	Toser poco	Frequency	To cough a little	Adverb
	Dormir poco	Frequency / Duration	To sleep a little	Adverb
	Pocos platos	Amount	A few plates	Adjective
	Lo poco que queda	Amount (literal / figurative)	What little is left (of …)	Noun
下	跳一下	Iteration (lowest)	Jump just once	Classifier
	走一下	Distance / Duration	Walk a little	Adverb
	汽车开了一下	Distance	The car moved a little	Adverb
	跳一下舞	Duration	To dance for a short time	Adverb
	你吃一下这个蛋糕	Amount (small part of whole)	Have a little of this cake	Adverb
	叫一下出租车	Delay (shortest)	Call a taxi straight away	Adverb
	井下	Lowest section of smth.	The bottom of the well	Noun
	下级	Next in descending order	To be of inferior status	Adjective
	下水	Downwards direction of mvt.	To throw into the water	Verb
	天一下晴了	Delay (suddenly)	Suddenly, the sun shines	Adverb