Task-specific faithfulness constraints
The case of acronyms in a constructed language

Marc van Oostendorp, Radboud Universiteit (Nijmegen, The Netherlands)

This paper reports on an experiment performed with 48 fluent speakers of a constructed language on their preferred pronunciation of made-up acronyms. The paper aims to contribute to our understanding of the theory of constraints in Optimality Theory: we find regularities in the preferences of the speakers that seem difficult to explain in theories in which constraints are given, but they **argue in favour of constraint templates**, but only for faithfulness constraints which help people to work with inputs of an unfamiliar type.

1. The theory of constraints. Although Optimality Theory is over 30 years old by now, it is still lacking a consensus on what is a possible constraint. In the original idea of Prince and Smolensky (1993), constraints were supposed to be universal, and innate. This idea seems to have been mostly abandoned, mostly because the number of constraints in the literature has exploded. One would say that it makes it a reasonable enterprise to try to find out what is the structure of this set, but it seems fair to say that little progress has been made in this direction. This paper discusses evidence that we can find phonological patterns for which it is very unlikely that they can be described purely on the basis of innate constraints, while at the same time there seem to some kind of universal agreement. We propose that although markedness constraints are basically universal (and either innate or motivated by universal cognitive of phonetic considerations) there is a way of constructing faithfulness constraints when confronted with specific material.

2. The experiment. We report on what is essentially a replication of Torres-Tamarit and Martínez-Paricio's (2023) (TT&MP) study on Spanish acronyms, but done with fluent speakers of the constructed language Esperanto (almost all 45 members of the international Akademio de Esperanto, in which 'the best speakers' of the language are chosen by co-optation, and a few others). In this study, speakers were confronted with a number of real or invented acronyms such as IFEK, BFM, PA, IL, TAR, or KLA, and they were asked how they would pronounce them, e.g. on a letter by letter basis ([i-fo-e-ko], where *fo* and *ko* are the letternames of the consonants *f* and *k*) or as a word [ifek]. They were also asked to where they would put stress.

The results were very similar to those of TT&MP: (a) in cases in which a word was a possible phonological word of more than two syllables, people would prefer to pronounce this as such, with stress on the penultimate syllable ([ífek]), (b) in cases in which phonotactics would disallow pronunciation as a word, informants preferred pronunciation on a letter-by-letter basis with stress on the final element ([bo-so-mó]), (c) in cases in which the form could be pronounced as a monosyllable, there was a marked distinction based on the number of letters: *pla* and *par* were usually pronounced as [pla] and [par] respectively, but speakers had a preference for [po-a] and [i-lo].

About the latter result, TT&MP already note that this seems to need a specific constraint for acronyms, viz. one which pays specific attention to the number of letters in the input. It is unlikely that such a constraint is universal; at the same time it is not so clear how such things are 'learned'.

3. The added value of a constructed language. Esperanto is a constructed language proposed in 1887, and which has since then gathered a worldwide community of a few tens of thousands of speakers worldwide. The dominant majority of those are not native speakers. Those who are native speakers always have another dominant language (e.g. that of the country where they have been born). The 45 members of the *Akademio de Esperanto* are supposed to be amont the most experienced users: they are writers, authors, linguists, journalists, etc., from all continents (but with a definite bias towards Europe and speakers of Indo-European languages; none of them is hispanophone.) 2 of the participants identified as native speakers. There are no prescriptive rules of how to pronounce acronyms (although there are several well-known acronyms in the languages such as *Universala Esperanto-Asocio, UEA).* Several of the participants explicitly commented on the fact that they had never thought about the issue, yet they had relatively strong intuitions about this.

4. The issue. There are three interesting points about our findings that we need to discuss: (a) the fact that the Esperanto results are very similar to those in TT&MP. Basically the same constraints and the same ranking can get the results.

(b) the fact that judgements were never unanimous, there was always variation, although there also always was a very clear trend.

(c) the fact that these patterns were independent of the speakers' native language.

5. Constructing faithfulness constraints. We propose that these findings indicate that speakers, on the one hand, can create faithfulness constraints that are to some extent task-specific. In the case of acronyms, they take a very specific input (a string of *capital letters* rather than a phonological object) and try to construct a tableau based on this. The grammar of this is not acquired in the regular way (this is not 'natural language acquisition'), but gradually built on the basis of familiarity. At the same time it is clearly not the case that 'anything goes', otherwise it would be difficult to understand that speakers (even speakers with very different linguistic backgrounds) converge on the same output.

We propose that we have a device of building constraints for new types of situations, such as pronouncing unknown acronyms. This device takes into account the ordinary of the language (the fact that Spanish and Esperanto speakers have a preference for trochaic words is a function of the fact that trochees are the default foot of those languages). At the same time, specific types of faithfulness can be constructed that do justice to the type of input at hand: for instance, pronouncing two letters as one syllable would make each of those not sufficiently salient.

The three points mentioned above will be explained in this way: (a) the mechanism of building new faithfulness constraints is not so much depended on the language as it is on the type of input (in this case, letter strings), (b) since constraint building will have to happen on the fly (and the grammar in question will not often be invoked for the average speakers), the speakers have less possibilities for converging on a specific form, (c) the grammar of the native language will be less relevant than the language at hand.

References

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