Exceptional non-triggers in Bijagó

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Summary. In Bijagó (Wilson 2000), an asymmetrical vowel system contributes to irregular patterns of vowel harmony that seem to challenge the classificatory powers of some lexical indexation models of exceptionality (e.g. Finley 2009, 2010). In this paper, I develop a set of theoretically-independent exceptionality criteria, which when applied to an analysis of Bijagó reveal that a set of exceptional undergoers of ATR harmony suggested in Finley 2010 are in fact entirely regular. These criteria also reveal that a set of exceptional non-triggers of ATR harmony are present in Bijagó, filling a previously-empty typological slot predicted by Finley's theory.

Background. Pater (2010) proposes a lexical indexation model of exceptionality which relies on both indexed faithfulness and markedness constraints. Pater argues that the inclusion of indexed markedness constraints, which have been argued to be too powerful (Inkelas & Zoll 2007), is necessary for the straightforward modeling of morphemes which exceptionally trigger a process. This model also predicts exceptional non-undergoers via indexed faithfulness, as well as their logical inverse (=undergoers) via indexed markedness under some conditions. The logical inverse of triggers (=non-triggers), however, is not directly capturable.

Finley (2010) proposes a modified version of Pater’s model that allows the straightforward generation of the full four-way typology. Finley also proposes a requirement that exceptions have “no phonological explanation” for their behavior, intended to restrict indexation to clearly lexical exceptions and avoid the conflation of exceptionality with other irregular surface patterns. For example, in many ATR harmony languages, the independent lack of a [+ATR] counterpart counts as a phonological explanation for the non-participation of [–ATR] /a/, so it is neither necessary nor appropriate to analyze instances of neutral /a/ as exceptional non-undergoers.

(1) Typologies predicted by two models of lexical indexation

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A descriptive typology of vowel harmony exceptions is introduced in Finley 2010 to support the model. While exceptional undergoers (U), non-undergoers (NU), and triggers (T) are all represented in this typology, non-triggers (NT) are conspicuously absent. Finley concedes that this may mean that non-triggering exceptions do not exist, calling into question the validity of the model; if exceptional non-triggers are unattested, then the model overgenerates.

Bijagó. A set of prefixes in Bijagó, a Bak (Niger-Congo) language, are categorized by Finley as exceptional undergoers of ATR harmony. A closer examination of the original data introduced in Wilson 2000, however, reveals that the asymmetric application of ATR harmony to some prefixes but not others is entirely regular. Bijagó’s seven-vowel inventory contains three vowels without ATR harmonic counterparts (/i u a/) and four vowels with these counterparts ([+ATR] /e o/ vs. [–ATR] /ɛ ɔ/). Prefixes containing vowels from the first set regularly fail to undergo ATR harmony (e.g. i-kentsó ‘tattoo lines’), while prefixes containing vowels from the second set regularly assimilate to the initial vowel of the root (e.g. ê-sinţ ‘cow,’ but ê-méni ‘python’). Patterns of root-internal ATR (dis)agreement follow a similar pattern: instances of root-internal disharmony overwhelmingly involve the unpaired vowels. With very few exceptions, mid vowels in roots agree for ATR, and the few exceptions still condition ATR harmony on prefixes normally
(e.g. mɔ̀-ŋɔ̀dɔ̀ ‘sleep (n)’). The ATR harmony system in Bijagó thus seems to be phonologically explainable in the same way as the behavior of neutral /a/ in more robust systems.

Acknowledgement of the regularity of ATR harmony in Bijagó further reveals that despite claims to the contrary, non-triggering exceptions do in fact exist. While most noun roots which take alternating prefixes condition harmony normally, a handful do not:

(2) Examples of exceptional non-triggers

ɛ̀-titi (*ɛ̀-titi) ‘island’
ɔ̀-ŋokotota (*o-ŋokotota) ‘elder sibling’

The phonological structures of the non-triggering roots include instances of root-internal harmony and disharmony, and involve vowels from both the unpaired and paired sets. The failure to trigger harmony is thus unexplainable via appeal to phonological structure, and so it is reasonable to class these objects as exceptional non-triggers, filling the missing gap in Finley’s typology.

Defining exceptions. I propose that the mis-categorization of the harmonizing prefixes as exceptions and the overlooked non-triggering roots in Bijagó are a consequence of a tendency in the literature to define “exception” in a theory-dependent or otherwise ambiguous fashion. This tendency makes it difficult to objectively evaluate predictions made by these and other models of exceptionality, and raises suspicion about claims regarding the possibility and frequency of different types of exceptional patterns.

To combat this issue, I present a set of theoretically-independent exceptionality criteria. These are an extrapolation and refinement of common assumptions made in the literature when diagnosing an object as an exception. These include a refined version of the “phonological explainability” requirement adopted by Finley, as well as notions of idiosyncrasy, lexical category, domain membership, prevalence of an exceptional pattern, typological unusualness, and source. These criteria have a compounding effect: the more that are applicable to an object, the more likely it will be treated as an exception under any theory (and vice versa).

I demonstrate that the application of these criteria to the Bijagó case further supports both the regular status of the harmony-undergoing prefixes and the exceptional status of the non-triggering noun roots. For example, a pattern which is rarer than its competitor is more likely to be treated as exceptional. In addition to being structurally dissimilar, the non-triggering stems in Bijagó are, unsurprisingly, much rarer than those which condition harmony, making up only 8% of the corpus (Wilson 2000:23).

Utilization of these criteria shifts our focus from “exceptional” vs. “regular” to a more gradient definition: items are “more” or “less” exceptional than others. This gradient definition of exceptionality allows more confidence and clarity in diagnosing an object as an exception, making it easier to investigate exceptions cross-linguistically, and making it possible to more carefully evaluate the claims and predictions made by theories of exceptionality.

References cited:
Finley, S. 2010. Exceptions in vowel harmony are local. *Lingua* 120, 1549-1566.