Iconic features in nominal reduplication

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Background. Reduplicative morphology is an important recurring topic in the study of iconicity. It is intuitively well-suited for iconic meanings like plurality, but often also expresses apparently counter-iconic meanings, like diminution. Relatedly, some frequent functions, such as collective (treating a group of multiple entities as a unit), appear to be neither iconic nor counter-iconic.

There is no satisfactory solution to these problems yet. Reducing all functions to one generic iconicity along the lines of "complex form reflects complex meaning" makes the wrong predictions (cf. Haspelmath 2008), as e.g. definiteness is clearly complex but never expressed by reduplication (Stolz et al. 2011: 194). Mattes (2014) proposes that reduplication iconically marks "change in quantity" – both increase (e.g. plural) and decrease (e.g. diminutive) – but does not explain how reduplication is cognitively suitable for marking decrease of quantity.

Contribution. I present a typological study of the morphology and semantics of nominal reduplication. One of its contributions is descriptive, cataloging the diverse set of meanings marked by different types of reduplicative morphology cross-linguistically. Contrary to similar recent studies (Mattiola & Barotto 2023), I present a decomposition of these functions into eight features, thus bringing structure to the large set of slightly different meanings.

The second contribution is the proposal of several independent iconicities (cf. Lǐ & Ponsford 2018). Each possible iconicity takes the form of a mapping between a formal property and a semantic property. For instance, the occurrence of *multiple elements* in a reduplicative form can iconically suggest *multiple entities* (i.e., plural number). Crucially, some iconicities are only relevant for some types of reduplication. Thus, in partial reduplication, the *smaller form* of the reduplicated element may suggest a *smaller referenced entity* (i.e., diminution). The fact that iconicities can be linked to specific formal types of reduplication allows us to statistically test their validity and strength on a large typological data set.

Data set. This study is based on a new, more precise examination of the data in the WALS chapter on reduplication (Rubino 2013). It is limited to the nominal domain for reasons of scope, but can in principle be extended to other domains. Rubino (2013) lists over 300 languages with productive reduplication, of which 183 have nominal reduplication. Many of these have multiple patterns/functions, for a total of 260 entries. For the statistical analysis, this large variety sample is reduced to a genealogically and areally balanced probability sample (138 patterns from 116 languages, and 97 languages without nominal reduplication).

Method. Reduplication patterns were tagged for formal type, i.e. full, partial, or echo reduplication; cf. (1):

(1) a. Hausa **full** reduplication (Newman 2000: 457–458)
         jōjì 'judge' → *jōjì~jōjì* 'judges' (plural)

     b. Central Cagayan Agta **partial** reduplication (Healey 1960: 10)
         hutug 'bow' → *hut~ot~ug* 'small bamboo bow' (diminutive)

     c. Eastern Panjabi **echo** reduplication (Bhatia 1993: 322)
         paaNii 'water' → *paaNii~vaaNii* 'water and the like' (non-identical plural)

Each pattern was also tagged for eight binary semantic features: [±plural]; [±collective]; [±distributive]; [±non-identical]; [±diminutive]; [±augmentative]; [±exhaustive]; and [±exclusive]. In the descriptive part of this study it is shown that these are sufficient to describe the different functions of nominal reduplication.

I then define five distinct iconicities which can be used to link these semantic features to specific formal properties of the different types of reduplication. For instance:

(2)   Distortion: the **phonetic distortion** of the base in the copy through the replacement of phonetic constituents may reflect **non-identical events, entities**, etc.

These iconicities each apply only to some formal types of reduplication: Distortion in (2) applies only to echo reduplication, and not to full or partial reduplication. This generates predictions – in this case that [+non-identical] will be marked relatively frequently by echo reduplication compared to other formal types of reduplication.

In the second, statistical part of the study, standardized tests are used to determine (a) whether these iconicities hold and (b) what their relative strength is. In this way, a large typological database can be used to empirically test the several proposed iconicities.

Results and discussion. Two out of four iconicities were confirmed. The first links full reduplication to [+exclusive] and [+exhaustive]; the second links echo reduplication to [+non-identical]. No hypotheses could be confirmed for partial reduplication (predicted were associations with [+diminutive] and [+collective]).

Besides statistically confirming two iconicities, this work is valuable in uncovering a different status for partial reduplication. The fact that partial reduplication is less suited for iconicity is in line with earlier results that it is less easily coined in both creoles and language acquisition (Stolz et al. 2011: 173, 177). Partial reduplication patterns may also be the result of grammaticalized full reduplication (Lehmann 2015: 139; Bybee et al. 1994: 166), which may be a source for non-iconic meanings.

In general, being more explicit about what is iconic about certain form-meaning pairings helps resolve questions about apparently counter- or non-iconic meanings of reduplication patterns. For instance, the apparently non-iconic feature [+non-identical] is not tied to reduplication itself, but to Distortion, which piggy-backs on reduplication.

References. Bhatia, T. K. 1993. *Punjabi: A cognitive-descriptive grammar*. ‖ Bybee, J., R. Perkins & W. Pagliuca. 1994. *The evolution of grammar. Tense, aspect and modality in the languages of the world*. ‖ Haspelmath, M. 2008. Frequency vs. iconicity in explaining grammatical asymmetries. *Cognitive Linguistics* 19(1): 1–33. ‖ Healey, P. M. 1960. *An Agta grammar*. ‖ Lehmann, C. 2015. *Thoughts on grammaticalization*, 3rd. ed. ‖ Lǐ, Y. & D. Ponsford. 2018. Predicative reduplication: Functions, their relationships and iconicities. *Linguistic Typology* 22(1): 51–117. ‖ Mattes, V. 2014. *Types of reduplication: A case study of Bikol*. ‖ Mattiola, S. & A. Barotto. 2023. Nominal reduplication in cross-linguistic perspective: From plurality to change of referents' specificity. *Studies in Language* 47(1): 135–189. ‖ Newman, P. 2000. *The Hausa language: An encyclopedic reference grammar*. ‖ Rubino, C. 2013. Reduplication (v2020.3). In M. S. Dryer & M. Haspelmath (eds.), *The world atlas of language structures online*. ‖ Stolz, T., C. Stroh & A. Urdze. 2011. *Total reduplication: The areal linguistics of a potential universal*.