27. Reduplication

Carl Rubino

1.   Features Values

The repetition of phonological material within a word for semantic or grammatical purposes is known as **reduplication**, a widely used morphological device in a number of the world's languages. The languages classified on the accompanying map are sorted into three categories: languages that do not employ reduplication as a grammatical device, languages that productively employ both partial and full reduplication, and languages that only employ full reduplication.

   Full reduplication is the repetition of an entire word, word stem (root with one or more affixes), or root. Examples are Nez Perce (Sahaptian; northwestern United States) full word lexical reduplication: *téːmul* 'hail' vs. *temultéːmul* 'sleet' (Aoki 1963: 43), or Tagalog full root reduplication, shown here with the verbalizing prefix *mag–*, where the reduplicant *isip* is identical to the base *isip* 'think': *mag–isip* 'to think' vs. *mag–isip–isip* 'to think about seriously.'

   Partial reduplication may come in a variety of forms, from simple consonant gemination or vowel lengthening to a nearly complete copy of a base. In Pangasinan (Austronesian; Philippines) various forms of reduplication are used to form plural nouns.

(1)   Pangasinan (Rubino 2001: 540)

CV–	*toó*	'man'	*totóo*	'people'
–CV–	*amigo*	'friend'	*amimígo*	'friends'
CVC–	*báley*	'town'	*balbáley*	'towns'
C_1V–	*plato*	'plate'	*papláto*	'plates'
CVCV–	*manók*	'chicken'	*manómanók*	'chickens'
Ce–	*duég*	'carabao'	*deréweg*	'carabaos'

The following feature values are represented on the map:

@	1.	Productive full and partial reduplication	278
@	2.	Full reduplication only	34
@	3.	No productive reduplication	56
		total	368

It has been observed that languages with productive partial reduplication will most likely also make use of full reduplication (Moravcsik 1978: 328), making semantic and grammatical distinctions in the use of the two reduplicative types, as seen in Squamish (Salishan; British Columbia).

(2)   Squamish (Kuipers 1967: 99–100)
        total: *k˚a̱iʔk˚a̱i*   'play hide and seek'
                                            from the root   *k˚a̱i*
        partial: *s–λ'lλ'lmut*   'old people'
                                            from the singular   *s–λ'lmut*

Languages that employ partial reduplication may do so in various ways. Reduplicated material is most often found at the beginning of a base, but occurs also in medial and final position.

(3)   Reduplicative prefixes, suffixes and infixes:

    a.   Hunzib (Nakh-Daghestanian; eastern Caucasus)
            initial CV(C) reduplication (van den Berg 1995: 34)
            bat'iyab   'different'   *bat'bat'iyab*   'very different'
            muğáλ   'after'   *mu.muğáλ*   'much later'

    b.   Choctaw (Muskogean; Mississippi and Alabama)
            medial CV reduplication (Kimball 1988: 440)

tonoli	'to roll'	*tononoli*	'to roll back and forth'
binili	'to sit'	*bininili*	'to rise up and sit down'

c. Paumarí (Arauan; Amazonas, Brazil)
final disyllabic reduplication (Chapman and Derbyshire 1991)
a–odora–dora–bakhia–loamani–hi
1PL–gather.up–REDUP–frequently–really–THEME
'We keep gathering them.'

The phonological nature of the reduplicated material varies from language to language and construction to construction. Reduplicative morphemes can be characterized by number of phonemes included in the copy, C, CV, CVC, V, CVCV, etc. (see 1, 3); the number of syllables to be reduplicated (see 3); or the number of repeated morae. In Ngiyambaa (Pama-Nyungan; New South Wales, Australia), the reduplicant consists of a copy of the first syllable and a copy of a light version of the second syllable, not including final vowel lengthening or a coda consonant (Donaldson 1980): *magu–magu:* 'around one,' *dhala–dhalarbi–ya* [REDUP–shine–PRES] 'to be pretty shiny'. In some cases, even the number of times a sequence is reduplicated is a morphological factor, e.g. Mokilese duplication vs. triplication: *roar* 'give a shudder' > *roarroar* 'be shuddering' > *roarroarroar* 'continue to shudder' (Harrison 1973).

Reduplicative constructions can also be characterized as being simple, complex, or automatic. A **simple** construction is one in which the reduplicant matches the base from which it is copied without phoneme changes or additions (see 3). A **complex** construction involves reduplication with some different phonological material, such as a vowel or consonant change or addition, or morpheme order reversal. Mangarrayi (Northern Territory, Australia) has a reduplicative construction to denote plurality in which the consonant of the second syllable and the vowel of the first syllable are copied to form a new second

syllable in the derived word. The newly created syllable does not correspond to any constituent in the original word: *walima* 'young person' > *walalima* 'young people'; *yirag* 'father' > *yirirag-ji* 'father and children' (Merlan 1982). In Tuvan (Turkic; Russia), diminutive *'s'* reduplication copies the entire base except the initial consonant, which is replaced by [s] in the reduplicant, e.g. *pelek* 'gift' > *pelek-selek* 'gift.DIMINUTIVE'. For bases that are vowel-initial, an onset [s] is added to the reduplicant, e.g. *aar* 'heavy' > *aar-saar* 'heavy.DIMINUTIVE'; *uuruk-suuruk* 'simultaneously' (Harrison 2000). Patterns such as these exist in a number of languages and are collectively referred to as "echo constructions."

Nias (Sundic, Austronesian; Sumatra) disyllabic reduplication sometimes includes voicing. *a-fusi* 'white' *a-vuzi-vuzi* 'whitish' (Brown 2001). Reduplication can also be discontinuous, in which case a small segment is inserted between the reduplicant and the base. In Alamblak (Sepik; Papua New Guinea), *ba* joins reduplicated constituents in an intensifying construction:

(4)   Alamblak (Bruce 1984)
        hingna-marɲa-ba-marɲa-më-r
        work-REDUP-*ba*-straight-REMOTE.PST-3SG.M
        'he worked very well'

Automatic reduplication is reduplication that is obligatory in combination with another affix, and which does not add meaning to the overall construction; the affix and reduplicated matter together are monomorphemic, e.g. the Ilocano (Austronesian; Philippines) pretentative prefix *aginCV-: singpet* 'behave', *agin-si-singpet* 'to pretend to behave.'

2.   Function

Reduplicative morphemes can carry a number of meanings, and in some languages the same reduplicative morpheme is used to denote quite contrary meanings. For example, the Ilocano CVC-distributive prefix for nouns, when applied to numbers, specifies limitation: *sab-sábong* 'various flowers', *wal-waló* 'only eight'. With verbs (and adjectives), reduplication may be used to denote a variety of things, such as number (plurality, distribution, collectivity), distribution of an argument, tense, aspect (continued or repeated occurrence; completion; inchoativity), attenuation, intensity, transitivity (valence, object defocusing), or reciprocity. For example, Alabama (Muskogean; Alabama) marks the temporary versus permanent distinction in verbal aspect via reduplication (vowel lengthening): *loca* 'to be black (covered in soot)' vs. *lóoca* 'to be a black person', as well as attenuation via gemination: *kasatka* 'cold' > *kássatka* 'cool', *lamatki* 'straight' > *lámmatki* 'pretty straight' (Hardy and Montler 1988). Luiseño (Uto-Aztecan; California) employs two types of reduplication quite iconically to denote various plural actions: *lawi* 'to make a hole', *law-lawi* 'to make two holes, make a hole twice', *lawa-láwi* 'to make many holes, more than two' (Kroeber and Grace 1960). Similarly, Lampung (Sundic, Austronesian; Sumatra) uses different reduplicative constructions to signal varying degrees of intensity: *balak-balak* 'very large,' *xa-xabay* 'somewhat afraid' (Walker 1976). Arapesh (Torricelli; Papua New Guinea) employs reduplication to intensify or distribute the meaning of an action, often implying carelessness or lack of control on the part of the agent: *su* 'touch, hold', *susu* 'touch all over, paw'; *ripok* 'cut', *riripok* 'hack up' (Dobrin 2001: 36).

With nouns, reduplicative morphemes have been known to denote concepts such as number (see 1), case, distributivity, indefiniteness, reciprocity, size (diminutive or augmentative), and associative qualities. For instance, Ilocano reciprocals: *balem-bales* (CVCN-revenge) 'avenge each other' (Rubino 2000: 84); Chukchi (Chukotko-Kamchatkan) absolute singulars:

jokwa-t (eider.duck-PL) 'eider ducks' vs. *jokwa-jow* (eider.duck-REDUP[ABS.SG]) 'eider duck, absolutive' (Dunn 1999: 132); and Yawelmani (Penutian; California) associatives *k'ɔhis* 'buttocks' > *k'ɔk'ɔhis* 'one with large buttocks' (Newman 1944).

With numerals, reduplication has been found to express various categories including collectives, distributives, multiplicatives, and limitatives. For example, Santali (Munda; India) *gɛ-gɛl* '10 each, by tens'; Pangasinan limitatives *tal-talora* 'only three'; Ao (Tibeto-Burman; India) final CVC reduplication distributives *asem* 'three' > *asemsem* 'three each', *ténet* 'seven' > *ténetnet* 'seven each' (Gowda 1975: 39). (See also chapter 54 on distributive numerals.)

Reduplication is also used derivationally to alter word class, e.g. Kayardild (Tangkic; Queensland, Australia) *kandu* 'blood' > *kandukandu* 'red' (Evans 1995); Luiseño (Uto-Aztecan) *lepi* 'to tan, soften' > *lepé-lpi-š* 'pliable' (Kroeber and Grace 1960); Tigak (Austronesian) *giak* 'send' > *gigiak* 'messenger' (Beaumont 1979); Khoekhoe (Central Khoisan; Namibia) causatives *ǃóḿ* 'difficult' > *ǃóḿǃom* 'make something difficult' (Hagman 1977: 18; note that the tone of the second syllable is lowered to mid tone).

Languages on the map are classified as having a productive reduplicative morpheme only if the morpheme can be systematically generalized to a set of open class words, and the morpheme can still be applied in the modern form of the language. Modern Greek, for example, is classified as a language that does not meaningfully employ reduplication, although there are a few reduplicative forms present in the modern language that are remnants of a previously productive reduplicative process. In Ancient Greek, the perfect was formed by a *Ce-* reduplicative prefix, e.g. *gé-grapha* 'I have written'; the modern equivalent is now periphrastic *éxo ɣráp-si* [I.have write-PTCP]. The old construction still appears, however, in some learned words, e.g. *ðe-ðo-ména* (Ce-give-MEDIOPASSIVE) 'data', *je-ɣon-os* (Ce-become/happen-PERFECT) 'event.' Modern Greek

has also borrowed from Turkish a nonproductive reduplicative prefix used with at least one affective/intensive adjective: *tsir-tsiplákis* 'buck naked' from *tsiplákis* 'naked' (cf. Turkish *bem-beyaz* 'very white' from *beyaz* 'white').

As can be seen from the map, reduplication is a much more pervasive phenomenon than someone coming from a Western European world view might imagine. Reduplication is very common throughout Austronesian (Pacific islands, Philippines, Indonesia, Madagascar), Australia, South Asia, and many parts of Africa, the Caucasus, and Amazonia. In the Western Hemisphere, some language families are particularly amenable to reduplication (Salishan, Pomoan, Uto-Aztecan, Algonquian, Yuman, Sahaptian, Siouan, etc.) while others are not, such as Athabaskan and Eskimo-Aleut. Western Europe is one area where reduplication does not play a critical role in the morphology. However, many Indo-European languages in the east, which are in contact with other language families, do have reduplicative morphemes.

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