A Dynamic Syntax modelling of Japanese and Rangi clefts: parsing incrementality and the growth of interpretation

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ABSTRACT

Japanese and Rangi (a Bantu language) employ cleft constructions to encode pragmatic functions relating to discourse salience. In Japanese, a cleft is formed through the nominaliser 'no,' the topic marker 'wa,' and the copula 'da.' In Rangi, a cleft is formed through the copula 'ní' which appears before the focus. This article provides a description of clefts in these two unrelated languages; in particular, Rangi clefts have been understudied, and our description represents a first systematic treatment. The article also develops an account from the new perspective of how a cleft string is parsed left-to-right in an online manner (Dynamic Syntax; Cann, R. et al. 2005. The Dynamics of Language. Elsevier). We propose that a number of seemingly idiosyncratic syntactic properties of clefts in these languages (including new data on case-marking patterns of foci in Japanese clefts and the auxiliary placement in Rangi clefts) can be accounted for by reference to left-to-right, online parsing, and the restriction on structural underspecification that is an integral part of the framework. Our account also models parallelisms and differences in Japanese and Rangi clefts in terms of parsing-dynamics.

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1. Introduction

Since Chomsky (1965), the competence/performance distinction has been a leading methodological principle in theoretical syntax. In mainstream generative grammar (Chomsky, 1981, 1995), competence is a set of principles and rules which models the tacit knowledge of grammar in the human mind. Under this view, competence is defined independently from language use; the research goal of generative grammar, therefore, is to logically characterise the system of competence, setting aside the issue of how this is put into use. In other versions of generative grammar, such as Head-driven Phrase Structure Grammar (Sag et al., 2003) and Lexical-Functional Grammar (Dalrymple, 2001), attention has been paid to the issue of how a competence model is transparently embedded within a performance model (Sag and Wasow, 2011). Dynamic Syntax (DS) (Cann et al., 2005; Kempson et al., 2001, 2011a) is yet another approach to linguistic enquiry that seeks to establish a performance-compatible competence model. In DS, competence is viewed as a set of constraints on language use, more specifically, a set of constraints on building up a structured interpretation through incremental, word-by-word parsing (see, e.g., Gregoromichelaki et al., 2011, Howes, 2012 for the DS modelling of language production with the same machinery). The mapping from a string of words to an interpretation is direct in that no independent level of syntactic structure is posited. The

core notion of DS – incremental growth of interpretation – has been demonstrated against a variety of structural phenomena and across a broad empirical base of languages.[2]

The present article argues for the significance of incrementality in syntactic theory by examining cleft constructions in two genetically/geographically unrelated languages: Japanese and Rangi (a Bantu language spoken in Tanzania). There are reasons to choose these as our target languages. Japanese has been studied extensively in theoretical syntax, and there is a wealth of past studies on Japanese clefts (Hiraiwa and Ishihara, 2012; Kizu, 2005; Seraku, 2013b). Japanese is therefore well-suited to test the adequacy of our account, embedding our findings within past works. Moreover, Japanese poses an illuminating puzzle for modelling incremental parsing since the verb – which is assumed to be a core element in terms of structure building – always comes clause-finally. Yet, the parser appears to start to process a clause even before the verb is encountered (Kamide, 2006; Kiaer, 2014); see also Kahraman et al. (2011) for Japanese cleft data. We also provide data on the case-marking of multiple foci in Japanese clefts, reinforcing Seraku's (2013b) observations (see also Seraku (2013a) for an earlier formulation of this account). Rangi remains under-described, and in particular, no detailed examination of clefts in the language has previously been offered. Our findings therefore contribute to the description of the language, as well as extending the empirical coverage of the DS modelling of clefts cross-linguistically. Rangi and Japanese clefts differ in a number of respects. For example, while clefts in both languages involve the sequence of a copula and a focus item, the linear order differs: in Japanese the ordering is focus-copula whilst in Rangi it is copula-focus. The positioning of the cleft cluster also differs: whilst the cluster appears sentence-finally in Japanese, it is sentence-initial in Rangi. These differences set a challenge particularly for surface-oriented grammars like DS, which defines a set of constraints on building licit structures reflecting the parse of a surface string.[3] Another crucial difference that will be addressed is that Japanese clefts allow multiple foci whilst these are barred in Rangi. The claim is that this difference reflects the way a structure is established, with underspecifications being gradually resolved. As such, Japanese and Rangi clefts pose problems for both surface-oriented grammars and syntactic research in general.

Section 2 sets out the data on Japanese and Rangi clefts. Section 3 introduces the DS framework, and Section 4 develops a formal account which predicts a number of properties of Japanese and Rangi clefts, including their cross-language parallelisms and differences. Section 5 constitutes a summary of the main results, highlighting implications for a dynamic typological model of clefts.

2. The cleft data

2.1. Japanese clefts

Japanese is strictly verb-final, with a basic S–O–V word order. In (1), the subject NP is marked with the nominative case particle *ga* and the object NP hosts the accusative case particle *o*.

(1) *Ruth-ga   ie-de   ringo-o   tabe-ta*
     R-NOM   house-in   apple-ACC eat-PAST
     'Ruth ate apples in the house'

The order of the constituents in the clause is free as long as the verb appears clause-finally. For instance, the ordering shown in (2) is also permissible with the same meaning (in terms of truth conditions) as conveyed by (1).

(2) *ie-de   ringo-o   Ruth-ga   tabe-ta*
     house-in   apple-ACC   R-NOM   eat-PAST
     'Ruth ate apples in the house.'

Japanese clefts are formed with three grammatical elements: the particle *no*,[4] the topic marker *wa*, and the copula *da*. The pre-*no* clause (called the "presupposition clause" (Kizu, 2005)) establishes the background. This clause involves a gap, to be associated with a focus. A "gap" here is construed theory-neutrally (see Section 4.1.1 for discussion). The presupposition clause is nominalised by *no* and topicalised by *wa*. A focus element is then presented, and the string is closed with the copula *da*.

(3) [*Ruth-ga   tabe-ta   no*]-*wa   ringo(-o)   da*
     [R-NOM   eat-PAST   NO]-TOP   apple(-ACC)   COP
     'It is apples that Ruth ate.'

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[3] As noted by a reviewer, these differences may be generalised in terms of the head-parameter in mainstream generative grammar. As a parsing-oriented framework, however, DS does not employ such parametric devices, and lexically-specified input is considered responsible for whether a transition from a particular tree state to another state is licit. Still, it is true that there is a tendency that head-initial/-final orders are consistent across constructions in languages, and it must be seen in future research how this consistency (together with its exceptions) is predicted within DS.

[4] *No* has been analysed diversely as a pre-nominal marker (Kitagawa and Ross, 1982), a pronominal (Hoji, 1990), a complementiser (Kizu, 2005), etc. In Section 4.1, *no* is regarded as a nominaliser; see Seraku (2013b: Ch.4) for its applications to the pronominal *no* and the complementiser *no*.