Asymmetric Resumption, Extension, and the Derivation of Hawaiian VSO

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This paper analyzes an asymmetry in the distribution of the Hawaiian particle *ai*, arguing that *ai* is a resumptive particle, with resumption occurring in object and adjunct-initial word orders, but not in subject-initial orders. While the observed asymmetry is not predicted by theories of syntax which allow movement operations that do not target the root (e.g. Chomsky 2008), it may be explained by analyses in which the Extension Condition (Chomsky 1995) is maintained. Both previously published and new field data are presented in this paper.

Pragmatically neutral clauses in Hawaiian have surface VSO word order, as in (1) below. First, this paper proposes that the surface VSO order is derived from an underlying SVO order. The surface order is taken to be derived by head movement of V to T (as proposed, for example, by McCloskey 1996 for Irish). It is assumed that subjects are valued for nominative case by the operation Agree (Chomsky 2001) in-situ at Spec, vP. This results in a representation as in (2) by Spell-Out.[1]

(1) Inu ana 'o Noelani i ke kope hu'ihu'i.
drink DIR SUBJ Noelani OBJ the coffee cold
'Noelani is drinking cold coffee.' (DIR= directional)

(2) [$_{CP}$ [$_{TP}$ V+v [$_{vP}$ Subj [$_{v'}$ t_{V+v} [VP t_V Obj]]]]]

While VSO is the neutral order, any constituent may be topicalized and appear preverbally (Hawkins, 1981). Whenever a non-subject argument or adjunct (including both DP's and PP's) is moved to a preverbal position, the resumptive pronoun *ai* (boldfaced) appears, as in (3); in this example, the surface order is OSV, a frequent and possibly required order when the object is preverbal. This contrast hold for both moved wh-elements (3) and non wh-elements (4).

(3) [He aka ka mea] Kekoa i ku'ai **ai**.
what the thing Kekoa PAST buy **ai**
'What is the thing that did Kekoa bought?'

(4a) Ua makemake **(*ai)** au i ka hale (Elbert and Pukui, 1979)
PAST like **(*ai)** I OBJ the house
'I liked the house.'

(4b) Ka hale a'u i makemake ***(ai)**
the house my PAST like **ai**
'The house I liked.'

[1] Data not otherwise cited was collected by the author, working with native speakers of Hawaiian. I would like to thank 'Ilei Beniamina and two addition native speaker consultants who wish to remain anonymous for their contribution to this research.

Descriptive grammars suggest that *ai* is a resumptive element, i.e. "every *ai* in Hawaiian has an antecedent, usually expressed, but sometimes understood" (Elbert and Pukui 1979). Adjuncts, when fronted, also induce resumption, as evidenced by the following contrast, in which a postverbal adjunct (5a) does not induce resumption, while a preverbal adjunct (5b) does (this example also shows a distinct *ua*/*i* alternation in the past tense marker, in which *ua* only appears sentence initially).

(5a) Ua noho ke kanaka i Hilo. (Elbert and Pukui, 1979)
PAST stay the man at Hilo
'The man stayed at Hilo.'

(5b) I Hilo kahi i noho **ai** ke kanaka.
at Hilo where PAST stay **ai** the man
'At Hilo where the man stayed.'

Surprisingly, when a subject appears initially, resumption does not occur; i.e. in surface SVO or SOV orders such as (6) and (7), *ai* is prohibited.

(6) 'O wai i ku'ai **(*ai)** i ka i'a.
SUBJ who PAST buy **(*ai)** OBJ the fish
Who bought a fish.

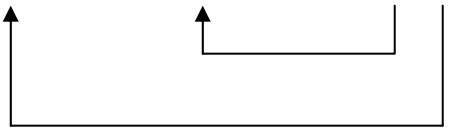
(7) Na Ma'ilou 'oe i malama a hanai **(*ai)**. (Hawkins, 1979)
PREP Ma'ilou you PAST care and raise **(*ai)**.
Ma'ilou cared for and raised you.

That SOV orders such as (7) do not induce resumption is interesting, because this shows that a preverbal object is not alone sufficient to trigger resumption. Instead, the object must be both verbal and initial. Given these data, this paper suggests that the distribution of *ai* can be explained via locality contrasts, under the analysis that resumption in Hawaiian is a phonological repair of a locality violation (see e.g. Boeckx and Lasnik 2006 and Merchant 2001 for different analyses). In order to explain data such as (7), in which a preverbal but non-initial object does not induce resumption, this paper adopts the 'tucking-in' model of locality as presented in Richards (1999, 2001).

This paper proposes that distance from C is the relevant distinction that drives the asymmetry, under the locality condition Shortest (Richards 2001). Note, however, that this notion of distance is neutralized for movement to Spec, CP in the system proposed by Chomsky's (2008) approach, in which T cannot act as a probe without C. Instead, the subject is internally merged only after C is externally merged, violating the Extension Condition of Chomsky 1995.

In Chomsky (2008), C and T are forced to probe Spec, vP simultaneously, under a condition of featural cyclicity (Chomsky 1993, Richards 2001). (8a) shows a possible derivation of an object initial sentence such as (4b); in this derivation, C attracts the object from its 'tucked in' (Richards 1999, 2001) position in inner Spec, vP, while T attracts the subject. Note that in this derivation, featural cyclicity is satisfied even though there is a non-root application of Merge, since all features are valued 'as soon as possible.'

(8a) $[_{CP}$ Obj $[_{C}$ C $[_{TP}$ Subj $[_{T}$ V+v $[_{vP}$ t_{Subj} t_{obj} $[_{v'}$ t_{V+v} $[_{VP}$ t_{v} $t_{obj}]]]]]]]$



(8b) List of Attractor-Attractee Pairs: {C, Obj}, {T, Subj}

Since the two sets of attractor-attractee pairs listed in (8b) have a null intersect, they are not comparable under Shortest (Richards 2001). The result is that object-initial orders would prohibit or only optionally require resumption under the resumption-as-repair analysis presented here, contrary to fact.

However, in a theory of syntax in which the subject must raise to T before C is merged, the object is 'farther' from C than the object is, at the point when C is merged, as in (9), in which the subject has already moved to Spec, TP and the object 'crosses over,' violating locality and necessitating the insertion of *ai* in Spec, vP.

(9) $[_{CP}$ Obj $[_{C}$ C $[_{TP}$ Subj $[_{T}$ V+v $[_{vP}$ t_{Subj} t_{obj} $[_{v'}$ t_{V+v} $[_{VP}$ t_{v} $t_{obj}]]]]]]]$

In order to account for these Hawaiian data, then, a new version of the Extension Condition is formulated in terms of Merge, such that applications of Merge must have at least one 'root syntactic head' as a term, where root syntactic head is defined as a syntactic head that is not c-commanded by any other syntactic head. This formulation of Extension therefore constrains Merge directly, which is taken to be the only structure building operation in this framework (Chomsky 1995, 2000), while at the same time allowing head movement and 'tucking-in' to multiple specifiers. Importantly for this paper, the Extension Condition as proposed here forces movement to target the root projection (thereby blocking the derivation in (8a)), such that the desired locality contrast with respect to Hawaiian *ai* is derived.

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