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On the Morphology of Movement
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1   Introduction

Observation:
Certain movement operations, like wh-movement, seem to be unbounded.

 (1) And what do you think he said he was pregnant of __? [...] And who do you think he
   said __ had produced it?   (Anecdote 215, Hastings 1986:251)

There is a great number of data that can be taken as evidence for the view that long movement
proceeds by successive-cyclic application of local movement steps:

(a) Semantic path effects: long-moved elements are interpreted in intermediate positions (re-
   construction effects, elliptic repair, pair-list readings).

(b) Morphological path effects: long movement affects lexical material between extraction site
   and final position (changing verbal agreement markers, complementiser selection).

(c) Syntactic path effects: long movement affects the syntactic environment between extraction
   site and final position (head and XP movement), or the moved item is multiply pronounced
   (copying, partial movement).

Desideratum for a grammar:
Enforce successive-cyclic movement by independently motivated properties of the system.

Background:
These properties follow from the widely assumed view that syntactic computation does not
operate on large portions of structure, but that the operation space available is restricted to a
small "window" (e.g. Chomsky 2000, 2006, 2008; Epstein & Seely 2002, ultimately going back
to Miller 1956), which reduces the overall complexity of the syntactic computation. Within the
minimalist program, the reduction of operative complexity is an indispensable property of an
optimally designed, efficient computational system (Kawashima & Kitahara 2004).

Possible implementation:
Phases as syntactic domains. In a phase-based syntax, "older" parts of the current structure
are transferred to the interfaces PF and LF at various points of the computation, so that deeper
embedded items cannot be accessed at the current stage of derivation. In this system, elements
that are needed later one must be made available at each phase edge.

Aim of this talk:
Propose new, uniform analysis for morphological and syntactic reflexes of successive-cyclic
movement. This is yielded by a new modelling of movement to intermediate phase edges.

2   Theoretical Background

2.1   Phase System

Each phrase is a phase (Manzini 1994, Epstein & Seely 2002, Müller 2004, Lahne 2008a); cp.
Takahashi (1994), Agbayani (1998), Sportiche (1998).

2.2   Heads and Head Movement

– Syntactic heads are bundles of unordered features.

– Head movement is a fusion-style operation by which the features of the goal are added to the feature set of the probe; attraction of a feature leads to pied-piping of the whole feature bundle of the goal (Roberts 2006, 2008a,b). Effect: avoids the c-command problem with head movement by adjunction; all feature of an active head are accessible.

2.3   Status of the Morphology

Lexical-realisational morphology, thus the feature bundles delivered by the syntax are post-syntactically correlated with phonological features (Halle & Marantz 1993, 1994; Harley & Noyer 1999 etc.). The correlation of phonological with syntactic features proceeds according to the Subset Principle.

(2) *Subset Principle (see Halle 1997):*
    A vocabulary item V is inserted into a functional morpheme M iff. (i) and (ii) hold:

    (i) The morpho-syntactic features of V are a subset of the morpho-syntactic features of M.

    (ii) V is the most specific vocabulary item that satisfies (i).

Effect of the Subset Principle:
Whenever a higher specified marker competes for a syntactic context with a less specified marker, then the higher specified marker is inserted, blocking the insertion of less specific markers. Specificity is determined by cardinality (Halle 1997), i.e., a matching marker α with a feature set A is more specific than a second matching marker β with a feature set B iff. $|A| > |B|$.

2.4   Movement to the Edge

Remember from above: Elements that are needed later one must be made available at each phase edge. This job is done by an availability requirement which synchronises the current make-up of the workspace with the shape of the current phase:

(3) *Phase Balance (PB; Heck & Müller 2000, 2003):*
    Every phase has to be balanced: For every feature [•F•]/[*F*] in the numeration there must be a distinct potentially available[1] feature [F] at the phase level.

Effect: PB reports back an error whenever an element that is needed later on is not potentially available. To rectify this, all elements that are still needed later on are moved to the phase edge. Movement to the edge is either a non-feature-driven operation, or triggered by an inserted edge feature.

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1. *Potential Availability* is defined as follows:

A feature [F] is potentially available at the phase level if (i) or (ii) holds:

(a) [F] is on X or on an edge element of X.

(b) [F] is part of the workspace of the derivation. The workspace of a derivation D comprises the numeration and material in trees that have been created earlier and have not been used yet in D.

2.5   Probe Impoverishment (Lahne 2008b)

Movement to intermediate landing sites is triggered by an edge feature. There is, however, no edge feature [•X•] as such. Rather, edge features are features that possess the edge property "[• •]", that is, the ability of building structure by merge. What is inserted is thus only the edge property. This property is no independent feature – just like a clitic, it needs a "host" that it docks on to, and it can be fused with any feature F of the current head.

Consequence: The newly created unit [•F•] then acts as an edge feature in that it triggers internal merge of an element that is later needed. When the edge property is dealt with, then the entire edge feature, including the "host", is deleted, so that [F] is not available anymore as a syntactic context at vocabulary insertion.

Effect on marker realisation: Due to the Subset Principle, it is always the most specific matching marker M_1 that is inserted. If morphosyntactic features are deleted before vocabulary insertion, then M_1 may not fit anymore into the relevant context. In this case a less specific matching marker M_2 is inserted.

3   Example 1: "Wh-Agreement" in Chamorro

3.1   Data:

Morphology of Verbal Predicates \ No Extraction:
Verbal predicates agree with their highest argument ("subject"). Subject agreement on the verb varies according to the transitivity of the predicate.

Table 1

Chamorro Subject agreement (Chung 1998:26f.)

TRANSITIVE [+V] PREDICATES			INTRANSITIVE [+V] PREDICATES		
	REAL	IRREALIS		REAL	IRREALIS
1 SG	hu-	(bai) hu-	1 SG	-um-	(bai) hu-
2 SG	un-	un-	2 SG	-um-	un-
3 SG	ha-	u-	3 SG	-um-	u-
1 DU IN	ta-	(u-)ta-	1 DU IN	-um-	(u-)ta-
1 DU EX	in-	(bai) in-	1 DU EX	-um-	(bai) in-
2 DU	in-	in-	2 DU	-um-	in-
3 DU	ma-	u- ma-	3 DU	-um-	u-
1 PL IN	ta-	(u-)ta-	1 PL IN	man-	(u-)ta-fan-
1 PL EX	in-	(bai) in-	1 PL EX	man-	(bai) in- fan-
2 PL	in-	in-	2 PL	man-	in- fan-
3 PL	ma-	u- ma-	3 PL	man-	u- fan-

Verbal Inflection in Clause-bound Dependencies:
There is a special morphological marking (="wh-agreement") that appears on verbs on the path between a wh-element and its trace (Chung 1998:234ff.).[2]

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2. Obj= direct and indirect objects; obl= oblique complements of intransitive predicates, instruments, subcategorised comitatives.

Table 2

Chamorro
[+V] predicates in
wh-constructions

		TRANSITIVE	INTRANSITIVE
WH_NOM	WH_NOM	realis: *-um-* irrealis: —	*— (=no special inflection)* —
WH_OBJ		opt. nomlz + *-in-*	
WH_OBL	WH_OBL	nominalisation nominalisation	unergative: nomlz unaccusative: nomlz + opt. *-in-*

Some properties of the "special marking":
1. It overwrites the regular subject-verb markers.
2. There is no uniform "wh-agreement" marker; the "special" morphology is sensitive to the argument status of the extracted element, transitivity, and mood.

Examples (Topping 1973, Chung 1998):

(4) a. Ha-fa'gasi   si   Juan i   kareta
         3SG-washed UNM Juan DEF car

         'Juan washed the car'   (Chung 1998:236; tr rl, decl)

     b. Hayi f<**um**>a'gasi i   kareta?
         who <AG>wash   DEF car

         'Who washed the car?'   (tr real, WH_nom)

(5) a. Pära u-bendi   yu' si   Carmen lepblu
         FUT 3SG.IRR-sell me UNM Carmen books

         'Carmen is going to sell me some books'   (Chung 1998:386; tr irr, decl)

     b. Hayi pära u-bendi   yu' lepblu?
         who FUT 3SG.IRR-sell me books

         'Who is going to sell me some books?'   (tr irr, WH_nom)

Verbal Inflection in Long Dependencies:
The special morphology appears on verbs on the path between extraction site and final landing site (though it always follows the paradigm in table 2; it does, for example, not occur on irrealis predicates).

Pattern: higher verbs do not register the argument status of the passing wh-element, but the respective argument status of the clause that the element is extracted from.

(6) Hafa um-istotba hao ni   malago'-ña   i   lahi-mu
     what AG-disturb 2SG COMP want-3SG.POSS DEF son-2SG.POSS
          SUBJ–UM   OBL–NMLZ

     'What does it disturb you that your son wants?[3]'

Previous analyses:
Chung (1998): The movement morphology is case agreement with an Ā-bound trace (="wh-agreement"), which is a special type of agreement specific to Chamorro.

Dukes (1992): The movement morphology are derivational affixes that indicate that a verb has pre-syntactically undergone a derivation process. Result: the argument structure of the predicate changes in such a way that the "movee" (or rather, the gapped element) is advanced

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3. Note: *want* in Chamorro is an intransitive taking an oblique complement.

into the subject position on the SUBCAT list.

Kaplan (2005): There is no successive-cyclic wh-movement. The seeming intermediate reflexes are cases of resumption under long movement (i.e., long movement in "one fell swoop" and couner-cyclic repair; a version of FORM CHAIN (Chomsky 1993, Takahashi 1994, Boeckx 2003).

3.2 New Analysis

Basic idea:

> Chamorro is a Philippine-type language (PTL) which is in the process of augmenting its Philippine style voice-marking system. A recent addition to the language is a transitive sentence type that bears no voice morphology. (Donohue & Maclachlan 2005:121).

Insight, new idea: There seem to be two competing agreement systems in this language: a voice marking system (markers *-um-*, *-in-*, *man-*, *fan-*), and a person-number marking system. The predicate registers both kinds of agreement, but in most syntactic contexts only one of the two agreement systems surfaces (though they can in principle co-occur, as in intransitive irrealis plural).

Assumptions on Chamorro argument structure and word order:

– Argument-introducing [•N•]-features have a non-deleteable counterpart [arg] (cf. Sternefeld 2006). These [arg] features are notated as clusters when V-to-v movement takes place.

– The verb-initial structure is derived by V-to-I movement (see Chung 1998).

Specifications for person-number markers:

(7) /ha-/ $\leftrightarrow$ [–1 –2 +sg –irr] /__ [cat:V]
    /hu-/ $\leftrightarrow$ [+1 –2 +sg] /__ [cat:V]
    /un-/ $\leftrightarrow$ [–1 +2 +sg] /__ [cat:V]
    /-ta/ $\leftrightarrow$ [+1 +incl pl] /__ [cat:V, –2, num]
    /in-/ $\leftrightarrow$ [α1 –α2 pl] /__ [cat:V, num]
    /ø-/ $\leftrightarrow$ [–1 –sg pl]/__ [cat:V, –2]
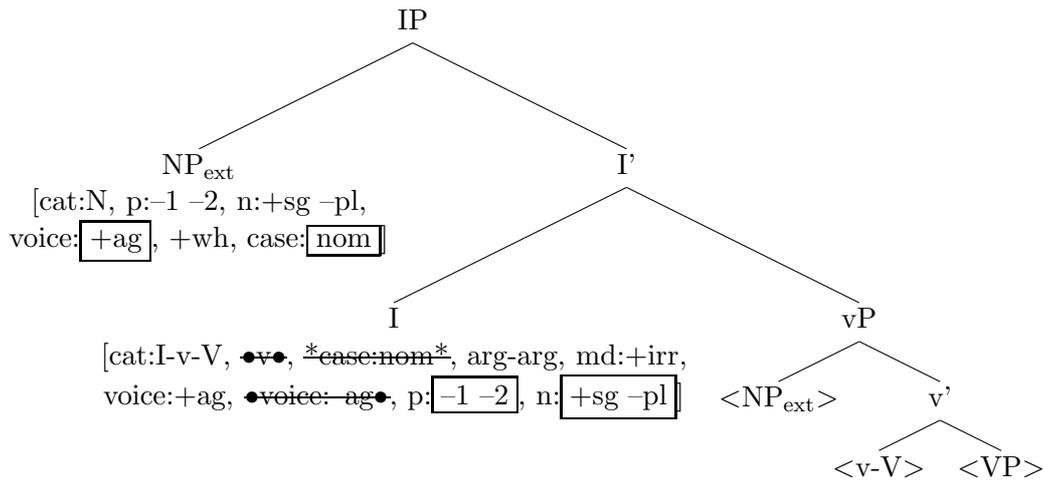   /u-/ $\leftrightarrow$ [–2] /__ [cat:V, +irr, num]

Specifications for the "special" markers:
Following Donohue & Maclachlan (2005) and Dukes (1992), I analyse the "special" markers as voice markers: *-um-* is an agent marker.
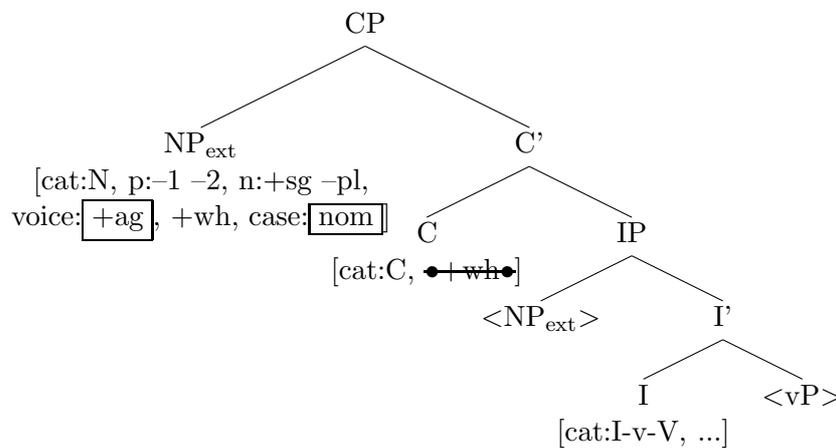
(8) /-um-/$\leftrightarrow$ [VOICE:+ag]

3.2.1 Clause-bound extraction (Example: NP$_{ext}$-Extraction from Transitive Predicates)

▶ Relevant point of the derivation: I is merged, v-to-I movement has taken place, Value$_{[case]}$ (I, NP$_{ext}$) has applied.[4]

(9)

```
                                    I'
                        ┌───────────┴───────────┐
                        I                        vP
      [cat:I-v-V, •v•, *case:nom*, arg-arg, md:MD,    ┌────┴────┐
       voice:+ag, voice:–ag, p:[–1 –2], n:[+sg –pl]] NP_ext    v'
                                              [cat:N, p:–1 –2, n:+sg –pl,  ┌──┴──┐
                                               voice:[+ag], +wh, case:[nom]] <v-V> <VP>
      [N: {C_[•wh•], ...}]
```

▶ Crucial step: Phase Balance applies. Result: a [•+wh•] feature is detected in the numeration (feature of C), but there is no element containing a [+wh] feature potentially available. Consequence: edge property insertion takes place. Rule:

(10) *Edge property insertion rules for I:*
    [voice:–ag] > [•voice:–ag•] /__ [cat:V +irr arg-arg]
    [num] > [•num•] /__ [cat:V –irr arg-arg]

▶ Possibility 1: In realis mood, the edge property is assigned to the number feature. NP$_{ext}$ is moved to the edge of I, and the number feature is deleted:

(11) *Edge feature insertion: transitive realis contexts*

```
                              IP
                  ┌───────────┴───────────┐
                NP_ext                     I'
       [cat:N, p:–1 –2, n:+sg –pl,    ┌────┴────┐
        voice:[+ag], +wh, case:[nom]] I         vP
                    [cat:I-v-V, •v•, *case:nom*, arg-arg, md:–irr,  ┌──┴──┐
                     voice:+ag, voice:–ag, p:[–1 –2], •n:[+sg –pl]•] <NP_ext>  v'
                                                                        ┌──┴──┐
                                                                      <v-V> <VP>
```

▶ Possibility 2: In irrealis mood, the edge property is assigned to the voice feature. NP$_{ext}$ is moved to the edge of I, and the voice feature is deleted:

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4. *Note:* The value MD is to indicate that the realis/irrealis distinction does not play a role yet. The combination of [+ag] and [–ag] does not lead to a clash – they are two valued features of the same kind, but expressing agreement with different items, just as the two sets of ϕ-features in languages with subject and object agreement.

(12) *Edge feature insertion: transitive irrealis contexts*

```
                                IP
                   ┌────────────┴────────────┐
                 NPₑₓₜ                        I'
        [cat:N, p:–1 –2, n:+sg –pl,     ┌─────┴─────────────┐
        voice: +ag , +wh, case: nom ]   I                   vP
                                                          ┌──┴──┐
      [cat:I-v-V, •v•, *case:nom*, arg-arg, md:+irr,  <NPₑₓₜ>    v'
      voice:+ag, •voice: ag•, p: –1 –2 , n: +sg –pl ]         ┌──┴──┐
                                                           <v-V>  <VP>
```

▶ Next step (for both realis and irrealis): Merge (C, IP). The [•+wh•] feature of C is satisfied by moving NP₍₊wh₎ to the edge of C.

(13)

```
                              CP
                  ┌───────────┴───────────┐
                NPₑₓₜ                       C'
       [cat:N, p:–1 –2, n:+sg –pl,    ┌─────┴──────┐
       voice: +ag , +wh, case: nom ]  C            IP
                               [cat:C, •+wh•]  ┌────┴────┐
                                            <NPₑₓₜ>      I'
                                                      ┌──┴──┐
                                                      I    <vP>
                                               [cat:I-v-V, ...]
```

Summary: Differences in the verbal feature set before and after extraction

Table 3

Chamorro Feature set of V_tr

		BEFORE EDGE MVT	AFTER EDGE MVT
	REALIS	[cat:I-v-V, arg-arg, md:–irr, voice:+ag, voice:–ag, p: *pers* , n: *num*]	[cat:I-v-V, arg-arg, md:–irr, voice:+ag, voice:–ag, p: *pers* ▓▓▓▓]
	IRREALIS	[cat:I-v-V, arg-arg, md:+irr, voice:+ag, voice:–ag, p: *pers* , n: *num*]	[cat:I-v-V, arg-arg, md:+irr, voice:+ag, ▓▓▓▓ p: *pers* , n: *num*]

Vocabulary insertion examples:

(14) a. *3rd singular transitive realis*
        Original feature specification of I: [–1–2, +sg–pl, +ag, arg-arg, –irr]
        Edge feature insertion: [num] > [•num•]
        Features left after extraction: [+sg–pl, +ag, arg-arg, –irr]
        Matching marker: /-um/ ↔ [+ag]

    b. *1st plural inclusive transitive irrealis*
       Original feature specification of I: [+1–2 +incl, –sg+pl, +ag, –ag, arg-arg, +irr]
       Edge feature insertion: [voice:–ag] > [•voice:–ag•]
       Features left: [+1–2 +incl, n:–sg+pl, arg-arg, +irr]
       Matching markers: /-ta/ ↔ [+1 +incl pl] /__ [cat:V, –2, num], /u-/ ↔ [–2] /__ [cat:V, +irr, num]

3.2.2   *Analysis of long movement*

In the new analysis, local extraction works in such a way that it is the position the wh-element originates from that determines the kind of special morphology that shows up. No additional assumption is needed to model long movement – the analysis works in exactly the same way as that for local extraction.

Example (again):

(15) Hafa um-istotba hao ni   malago'-ña   i   lahi-mu
       what UM-disturb 2SG COMP want-3SG.POSS DEF son-2SG.POSS
           SUBJ–*um*   OBL–NMLZ

       'What does it disturb you that your son wants?'

When arguments are clausal entities, then they are merged in the same location as their nominal counterparts.

Crucial point of the derivation:

(16)
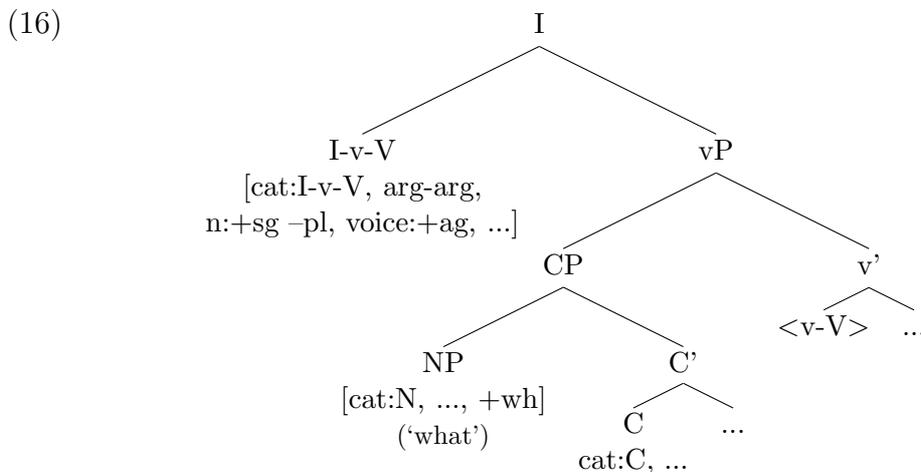
Now phase balance applies.

Observation: Both the argument itself and the element(s) at its edge are accessible to the higher probe. Therefore, probe impoverishment is "blind" to the moved item being the entire argument or an element from the edge of the argument.

Effect: The wh-element is moved to the edge of I, and I is impoverished by either [voice:–ag] (in irrealis contexts) or [num] (in realis contexts). Result: subject extraction morphology on the matrix verb.[5]

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5. The sentential subject constraint does not seem to hold in Chamorro; see Sabel 2002.

Question:
Why does impoverishment apply on the head I?

Answer:
Edge property insertion rules are not defined for a specific head; rather, the insertion takes place whenever the system encounters a matching feature. The site of Impoverishment in this example must be I. Reason: Probe impoverishment can only apply on a head that triggers an intermediate movement step. In the example examined here, the impoverished head can't be v, as the subject is base-merged as a specifier of v. Likewise, it can't be C, as movement to C is wh-feature driven in clause-bound dependencies. This leaves I.

4   Example 2: Complementiser Selection in Modern Irish

4.1   Data

All complementiser-like particles between a wh-phrase or relativised element and its base-merge site show a special form: Instead of the regular form go^N, the particle a^L appears, immediately preceding the verb and forming a prosodic unit with it (McCloskey 1979, 2001, among others).[6] A^L and go^N are in complementary distribution.

Examples:

(17) a. Mheas mé [gu-r^L dhúirt sé [gu-r^L thuig sé an t-úrscéal]]
thought I [that-PST said he [that-PST understood he the novel]]

'I thought that he said that he understood the novel' (McCloskey 1979:17)

b. An t-úrscéal a^L mheas mé [a^L dúirt sé [a^L thuig sé]]
the novel thought I [said he [understood he]]

'the novel that I thought he said he understood' (McCloskey 1979:17,54)

c. Cén t-úrscéal a^L mheas mé [a^L dúirt sé [a^L thuig sé]]
which novel thought I [said he [understood he]]

'Which novel did I think he said he understood?' (McCloskey 1979:54)

4.2   Analysis

Proposal:
a^L is an affirmation marker, specified for [+affirmative].

Feature specifications for Irish preverbal particles:[7]

(18) /go^N/ ↔ [–root, +decl, +aff, +assr, +fin]
/ø/ ↔ [+aff, assr, fin][8]
/a^N/ ↔ [+aff, assr]
/a^L/ ↔ [+aff]

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6. The superscript 'L' signals that the particle gives rise to lenition of the following consonant. 'N' is the sign that a lexical item causes nasalisation of the following consonant.
7. The lack of the ±-value of a feature [F] indicates that the marker is underspecified for [F]. Thus, /ø/ is not specified for the value 'finite', but underspecified for finiteness.
8. The zero marker blocks /a^N/ in root contexts.

Scenario without movement:

The insertion of a^L is blocked by the more specific vocabulary items $/go^N/$, $/\o/$ and $/a^N/$, which are all specified for [+aff], too.

Scenario with successive-cyclic movement:

The phase heads on the path of the moved element are impoverished by edge property insertion in such a way that they "lose" a [+assr] or [–assr]-feature. Result: The more specific markers do not fit anymore into the given syntactic context; a^L is then the only matching marker.

Edge property insertion rule:

(19) [±assr] > [●±assr●]

Question 1:

Where does the rule apply?

Answer:

The edge property insertion is not defined for a specific head; rather, it applies whenever the system encounters the feature [+assertive] or [–assertive]. As the minimal category that is assigned a truth value is the vP, [±assr] is arguably a feature of v which moves upwards together with the verb. Prob impoverishment thus applies when items are successive-cyclically moved to the edge of v, I, or C.

Question 2:

How does the theory accomodate for the fact that the C head that finally attracts the moved element shows the underspecified marker, too, although it is not impoverished according to the theory?

Answer:

Within the current theory, this suggests that probe impoverishment happens on a head below C. Again, the only possible impoverishment site is I (it can't be v, as the movement morphology appears with subject extraction, too). The verbal head then moves to C and thus takes its impoverished feature set along.

5 Example 3: Tonal Reflexes in Kikuyu

5.1 Data

In Kikuyu, movement of wh-, relativised and focused elements has an effect on the tonal pattern of a sentence.

Pattern:

All <u>verbs of affirmative main clauses</u> in which no wh-movement, focusation or relativisation has taken place appear with a tonal downstep that affects the tonal pattern of surrounding segments (Clements 1984b:317). The "downstep element" is a word-final extra-low tone which is not associated with tone-bearing units (Clements & Ford 1979, Clements 1984b,a).

Effects of the floating low tone:

– It causes preceding low tones to change into high tones; this process stops at syllables with an underlying high tone.

– Whenever the "downstep" appears in a non-sentence-final position, then all following tones are produced in a lower pitch register (i.e., they are "downstepped").

– If the floating low tone appears in a sentence-final position, then it blocks the otherwise exceptionless rule that one or more high or raising tones in absolute sentence-final position are changed to low.

Example:

(20) Kamaú ɛ́:ᶦr-íré　　Ka:nákɛ́ [átɛ́ Káriŏk̀ᶦí á-tɛ́m-íré　　mótĕ]
　　 Kamau SP.tell-PST.CP Kanake [that Kariūki SP-cut-PST.CP tree　]
　　 'Kamau told Kanake that Kariūki cut the tree'　　　　　　　(Zaenen 1983:473)

The verb form 'told' underlyingly bears a floating low tone:

(21) ɛ́:ᶦr-íré-ᶦ
　　 SP.tell-PST.CP-TDOWN
　　 'told'

Underlying tones of 'Kanake', 'that' and 'Karioki':[9]

(22)　a. /ka:nákɛ́/ 'Kanake'
　　　b. /ate/ 'that'
　　　c. /kariokĭ/ 'Karioki'

In (20), the free low tone of the matrix verb cannot float to the end of the following constituent 'Kanake', as /ka:nákɛ́/ ends on a high tone; likewise, it cannot attach to 'ate', as the complementiser is not a phrasal constituent. Instead, the low tone floats behind the low-toned sequence /kario/ of the following phrasal constituent 'Karioki'.[10]

Effects of the floating low tone in the example:

– All tones following it are downstepped.

– The underlying low-toned sequences /kario/ and /ate/ are changed to high tone.

This tonal pattern is affected in the context of clause-bound and long relativisation, wh-movement and focusation. In these contexts, the post-verbal tonal downstep is deleted:

(23) Nó-o_i　　Kámaú ɛ́:ᶦr-íré　　Ka:nákɛ́ [áte　t_i o-tɛm-íré　　mote]?
　　 FOC-who Kamau SP.tell-PST.CP Kanake [that　PP-cut-PST.CP tree　]
　　 'Who did Kamau tell Kanake that cut the tree?'

Effects of the downstep deletion:

– The sequences following the position where the low tone is expected are not pronounced in a lower pitch register.

– The preceding *ate* is not influenced in its tonal pattern by the downstep.[11]

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9. The representation of tones follows Clements et al. (1983): [´] = high tone, [ ] = low tone, [`] = extra low tone, [˘] = rising tone, [ˆ] = falling tone.
10. The downstep appearing within the matrix verb is lexically determined.
11. The initial high tone /á/ in /áte/ is due to high tone spread from the preceding high-toned /ɛ́/.

5.2 Analysis

Proposal: The downstep is a polarity marker specified for [+affirmative] (cp. Clements 1984b:328).

(24) *Morpho-syntactic specification of the floating low tone*
   /$^!$/ $\leftrightarrow$ [pol:+aff]

Edge property insertion targets the [pol:+aff]-feature.

(25) *Edge property insertion rule:*
   [pol+aff] > [●pol:+aff●]

Question:
On which head does the deletion of [pol:+aff] take place?

Answer:
I assume, following e.g. Laka (1990), Zanuttini (1997), and contrary to e.g. Koizumi (1995), that information on polarity is located below the C domain; [pol:±aff] is thus a feature of I. Edge property insertion takes place whenever the system encounters a matching feature; i.e., on I.

Derivation (in brief):
There is a point in the derivation when the I phase is valued. When a wh-item is moved to the edge of I, then this leads to the deletion of the feature [+aff] (if present). Result: At vocabulary insertion, /$^!$/ does not match anymore into the given context.

6   Consequences

6.1   Properties, Advantages

– There are no postsyntactic impoverishment rules; rather, impoverishment happens in the syntax as a last resort operation. Chung (1998): The movement morphology is case agreement with an Ā-bound trace (="wh-agreement", special type of agreement specific to Chamorro). New analysis: What is specific to Chamorro is a version of an Impoverishment rule (which is generally agreed to exist anyway).

– The approach offers a uniform analysis of morphological and syntactic reflexes of successive-cyclic movement, as the analysis of Chamorro "wh-agreement" presented here can be carried over to complementiser selection in Irish, tonal downstep in Kikuyu, verb inversion, CP extraposition etc.

– The approach correctly derives the surprising characteristic of long movement in Chamorro that higher verbs do not register the argument status of the passing wh-element, but the respective argument status of the clause from which the wh-element is extracted.

– Syncretisms in the verbal morphology of Chamorro and Irish can now be treated as occurrences of one and the same underspecified marker, in accordance with the Syncretism Principle (Alexiadou & Müller 2008).

(26) *Syncretism Principle (Alexiadou & Müller 2008, Müller 2008):*
   Identity of form implies identity of function (within a certain domain, and unless there is evidence to the contrary).

Consequence:
Syncretic markers in a derivation A and a derivation B are evidence that A and B are derivationally related, so that the same (underspecified) marker fits in both contexts.

6.2   A New Generalisation

(27) When a language shows different exponents in movement and non-movement contexts, then the marker appearing in the context of movement is less specific than the marker appearing in non-movement contexts (=retreat to the general case, emergence of the unmarked).

6.3   A Striking Property

The new analysis works without restrictions on extraction ("subjects-only"), but yields the same effects.

Observation:
In many Austronesian languages, movement of non-subjects yields passive morphology on the verb.

"Standard" analysis:
A non-subject can only be extracted if it is promoted to subject (e.g. Keenan & Comrie 1977, 1979; Aldridge 2004; Rackowski & Richards 2005). In other words, in order to extract an element α, the system must form a structure A, which is recognisable by the marker M.

New analysis:
Any element can be extracted. The extraction of α automatically makes the outcome of the derivation look like A, as the feature sets of probes along the movement path are manipulated, so that at vocabulary insertion, M, which would normally be blocked by more specific markers, is the only matching marker now.

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