Clause Structure and Adjuncts in Austronesian Languages: A Critical Introductory Survey[*]

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Syntactic analyses of Austronesian languages have predominantly been concerned with three phenomena. First, and perhaps most widely known, there is the controversy about how to view Philippine-type voice systems. These are typically symmetrical in the sense that what resembles passivization does not lead to demotion, i.e. oblique status of one of the arguments involved. This symmetry is closely related to the difficulty of determining the grammatical function of "subject." Thus, although voice morphology correlates with (the semantic role of) a single designated argu-ment, which we will call "trigger" (argument) henceforth, standard subject properties are distributed between this trigger and an actor argument when the two do not coincide. Secondly, Austronesian languages tend to have head initial word order, which often results in verb initial or predicate initial clause structure. Thirdly, there exists a condition on unbounded dependencies for arguments, disallowing extraction of anything other than the trigger.

While questions surrounding these issues are clearly far from settled, the volume we are presenting and discussing here is intended to shift per-spectives and reflect on the status of adjuncts in Austronesian languages as well as the repercussions this has on analyzing Austronesian clause structure. The most obvious motivation for this shift is that much less is known about adjuncts in Austronesian languages. Secondly, studying the syntax of adjuncts in other languages has regularly been a catalyst in de-veloping more fine-grained theories of phrase structure and locality. Thirdly, recent controversies about the nature of adverb placement, i.e. whether or not it is governed by a universal hierarchy of functional projections, has made a survey of less well documented language types such as Austronesian languages more urgent, not the least because an initial study of Malagasy adverb order indicated an interesting kind of con-firmation of the formalist / universalist hypothesis.

We will now proceed as follows. Section 1 provides a rough sketch of the three "big questions" of Austronesian syntax mentioned above. Section 2 will then be devoted to adjuncts and briefly document some of the most

influential syntactic studies of adjuncts and their consequences for syntactic theorizing. This will be interlaced with discussion of Austronesian adjuncts, providing an overview of some currently available insights and raising a number of research questions that we feel have to be tackled in future research. As we go along, we will introduce and critically reflect on the seven studies comprising the main chapters of this volume and point out their contribution to the bigger picture as we see it. Summaries of the individual chapters can be found in the preface to this volume.

1.   Three major issues in Austronesian syntax

It is hardly controversial that the questions of how to analyze Philippine-type voice systems, head intial clause structure, and the "trigger-only" condition on unbounded dependencies have taken center stage in analyses of Austronesian syntax.[1] It is equally clear that an appraisal of the syntactic behavior of adjuncts in Austronesian languages only makes sense against the background of these issues. It is thus useful to give at least a rough sketch of each of them in turn.

1.1. Philippine-type voice

The specifics of Philippine-type voice systems can best be introduced by way of an example. Thus, consider the following sentences from Tagalog (Schachter 1993: 1419).[2]

(1)   a. *Mag-aabot   ang babae   ng laruan sa bata.*
          AT-will.hand T   woman   TH toy   D child
          'The woman will hand a toy to a/the child.'
       b. *Iaabot   ng babae   ang laruan   sa bata.*
          THT.will.hand A   woman   T   toy   D child
          'A/The woman will hand the toy to a/the child.'
       c. *Aabutan   ng babae   ng laruan ang   bata.*
          DT.will.hand   A   woman   TH toy   T   child
          'A/The woman will hand a toy to the child.'

As is well-known, alternating verbal morphology roughly correlates with (the thematic macro-role of) the *ang*-marked argument, which we will call

"trigger", following Schachter's (1993) suggestion for avoiding the controversial term "subject". Thus, actor-trigger morphology (AT) on the verb in (1a) designates *ang babae* as trigger, as evidenced by the trigger marker *ang* (T). Theme-trigger (THT) and directional trigger (DT) morphology single out *ang laruan* and *ang bata* as triggers in (1b) and (1c) respectively.
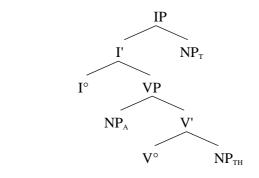
One of the reasons for researchers being reluctant to identify the trigger with the (surface) subject is the fact that it can be reflexivized and bound from within the local clause. This is illustrated for Toba Batak in (2) (Sternefeld 1995: 56),[3] where NAT stands for non-actor trigger morphology.

(2)   *Di-ida   si   John   diri-na.*
          NAT-saw   A   J.   T.himself
          'John saw himself.'

As Johnson (1977: 688) rightly pointed out already, facts like (2) and other "distributed" subject properties can be handled "within any theory that has grammatical stages", i.e. theories that rely on D-structure, S-structure and Logical Form like Government and Binding Theory (GB) (Chomsky 1981) or intial and final strata like Relational Grammar (RG) (Perlmutter 1980). What has remained controversial is whether the notion of subject should be dropped from the toolkit of universal grammar completely, as suggested for example by Schachter (1976) and assumed within the framework of Role and Reference Grammar (RRG) (Van Valin 1993), as well as by Williams (1984). Alternatively, the grammatical function of subject has either been taken to be defined phrase structurally (Chomsky 1965) or multifactorially (Keenan 1976b), or to figure as a primitive of the theory. The latter has been advocated in RG and Lexical Functional Grammar (LFG) (Bresnan 2001).

Unsurprisingly, there are various formal analyses of the trigger, among which one can discern the following three main groups. Group 1 assimilates the trigger to a surface subject bearing nominative case[4] and relegates binding to thematic structure, following Bell (1976). This is implemented LFG-style in Kroeger (1993) or GB-style by Guilfoyle, Hung & Travis (1992). Let us have a look at the latter very explicit and influential "GHT-system."

(3)

```
                        IP
                      /    \
                    I'      NP_T
                  /   \
                I°     VP
                     /    \
                  NP_A     V'
                         /    \
                       V°      NP_TH
```

By base generating all arguments VP-internally, hierarchically ordered in accordance with the thematic hierarchy, as argued for on the basis of his "Uniformity of Theta Assignment Hypothesis" (UTAH) by Baker (1988), this system allows binding principles to apply at D-structure and predicts actor arguments to bind reflexivized theme arguments as in (2).[5] At the same time, trigger morphology on the verb is taken to block *in situ* case assignment to the corresponding argument, which is therefore forced to leave VP and acquire (nominative) case in Spec,IP. Thus, AT-morphology leads to an actor trigger and THT-morphology forces the theme argument to assume trigger function. Importantly, case absorption on the theme does not lead to oblique status of the actor. This modification of standard GB assumptions about passivization suffices to essentially capture the symmetrical nature of Philippine-type voice.[6]

Group 2 takes the trigger to correspond to the absolutive argument in an ergative system. Recent proponents of this approach are Maclachlan & Nakamura (1997), Wegmüller (1998), and Aldridge (2004). Under such a perspective, the THT variant of (1), i.e. (1b), is the unmarked transitive clause, not a passive, while the AT structure in (1a) is taken to correspond to an antipassive. Arguments for this have to do with the overall lesser markedness of theme trigger morphology, which is mirrored in the higher frequency of THT clauses over AT clauses in texts (see Aldridge 2004: 59 for references). Also there exists an indefiniteness requirement on theme arguments in (1a), which appears to be a wide-spread feature of ergative languages (cf. Wegmüller 1998: 81). At first sight, the analyses of group 2 resemble those of group 1 to a large extent. Thus, binding facts are again relegated to the uniformly projected VP. This is then supplemented by case marking mechanisms. These, however, show an asymmetry that the GHT-system lacks. Thus, Wegmüller (1998: 247) manipulates the base position of the theme argument, generating it as specifier vs. adjunct of a lower VP

in THT vs. AT structures respectively. This allows her to exempt the (ad-joined) theme argument from being assigned absolutive in antipassive structures.[7] Aldridge (2004) distributes the assignment of absolutive among two heads. Thus, v°, the head of v(oice)P, assigns absolutive to the internal (theme) argument in transitive THT structures, while I° (= T° in her system) assigns absolutive to the external (actor) argument in antipassive AT structures. Aldridge goes on to argue for a more symmetric ergative analysis of languages like Seediq, where T° alone figures as assigner of absolutive case. She also assumes Malagasy to be an ergative system whose antipassive has been reanalyzed as an active clause.[8] One important consequence of this kind of approach is that the notion "ergative" must be taken as an envelope within which different grammar types emerge.[9]

According to group 3, finally, the trigger is a more peripheral category in an A-bar position, roughly comparable to fronted XPs in Germanic V2 languages. Recent proponents of this idea are Richards (2000), Sells (2000), and Pearson (2001, 2005). Thus, Richards (2000: 107) extends the GHT structure to the one given in (4).

(4) $[_{CP} NP_T [C° [_{IP} \_\_ [I° [_{VP} NP_A [V° NP_{TH}]]]]]]$

According to him, the major difference between V2 languages and e.g. Tagalog lies in the point at which Spec,CP is filled: S-structure in the former and LF in the latter case. This approach dissociates trigger-choice from clausal transitivity, coming closer to more traditional conceptions of triggers as somehow information-structurally determined.[10] At the same time, no commitment has to be made as to whether the trigger is either exclusively a topic or a focus (cf. Sells 2000: 122). Such an exclusive decision would be highly problematic as shown by Kroeger (1993). Instead, trigger choice acquires the well known text-sensitive elusiveness of fronting in languages like German.[11]

Additional assumptions are necessary, of course, to induce the correct trigger morphology on the verb. Pearson (2005: section 3) suggests that these morphemes are licensed on the verb when it goes into a specifier-head relation with an A-bar operator within a projection where case is checked. For AT morphology the required projection would be TP, for THT some counterpart of v(oice)P. This mechanism clearly reinvokes earlier "*wh*-agreement" approaches to Austronesian voice in Chamorro (Chung 1994), Palauan (Georgopoulos 1985), and Selayarese (Finer 1997).[12]

A closely related variant of a group 3 analysis is defended by TRAVIS,[13] who assimilates triggers to A-bar binders in "clitic left-dislocation" (CLLD) structures (cf. Cinque 1990). TRAVIS reanalyzes trigger morphology as "verbal clitics" heading functional projections the specifier of which is occupied by an empty pronominal DP, i.e. *pro*.[14] This is closely related to assumptions made by Sells (2000), who pointed out that empty trigger-related *pro* in a language like Tagalog may have overt counterpart clitics like *ya* in Kapampangan, as shown in (5).[15]

(5)   *King=tindahan ya   sinali   ng=mangga ing=lalaki.*
      OBL=store   3SG.N   bought   GEN=man   T=man
      'At the store the man bought a mango.'

Now, crucially, TRAVIS takes the relation between the trigger and *pro* to be a binding relation like the one involved in CLLD and the relation between the trigger and its sister constituent containing *pro* as an instance of predication. This is part of a larger theoretical move toward eliminating all NP/DP-movement from verb initial Austronesian languages (see below). As noted by TRAVIS herself, more work is needed to account for the general constraint against multiple triggers. Appeal to the formal tools licensing CLLD alone does not suffice, given that "[i]n CLLD there is no (theoretical) limit to the number of "left-dislocated" phrases" (Cinque 1990: 58). The same issue arises wrt overt clitic constructions in Kapampangan, which in addition to the trigger can license a topicalized actor, as shown in (6) (Sells 2000: 124).[16]

(6)   *ing=lalaki seli   na   ya   ing=mangga.*
      NOM=man   bought   3.SG.A   3.SG.N   T=mango
      'The man bought the mango.'

1.2. Head initiality

With this background on voice phenomena,[17] let us now turn to the second major issue of Austronesian syntax, namely, head initial structures. Thus, in terms of default word order, many Austronesian languages must be described as verb – or predicate initial. This is illustrated for Toba Batak in (7a) (Wouk 1986: 395) and Makassar in (7b) (Jukes 2005: 662).

(7) a. *Manga-lompa dengke si Ria.*
       AT.cook   fish   ART Ria
       'Ria is cooking fish.'
     b. *Bambangi=i allo-a.*
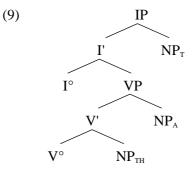   hot=3.ABS   day-DET
       'The day is hot.'

In Formosan and Oceanic languages predicates are often preceded by auxiliary-like "preverbs" or TMA-markers. This is shown for Atayal in (8a) (Aldridge 2004: 80) and Tongan in (8b) (Otsuka 2005: 69).

(8) a. *Musa'-maku' pma-n hiya.'*
       ASP   1SG.GEN wash-PT 3SG.NOM
       'I am going to wash him.'
     b. *Na'e tangi a' Sione.*
       PST cry ABS Sione
       'Sione cried.'

The main controversy among syntacticians concerns the question as to whether verb / predicate initial structures are base generated, as argued for by adherents of group 1 such as Holmer (1996) for Seediq and Keenan (2000) for Malagasy, or derived. Among those who assume the latter, group 2 advocate leftward head (X°-) movement, as do GHT (1992) for Cebuano, Indonesian, Malagasy, and Tagalog as well as Otsuka (2005) for Tongan. By contrast, group 3 defend application of leftward phrasal (XP-) movement for languages like Malagasy, Niuean, Palauan, and Seediq (cf. Aldridge 2004, Massam 2000, 2001, Rackowski and Travis 2000, Pensalfini 1995, Pearson 2000).

Now, a group 1 approach would simply regularize the GHT structure in (3) somewhat further and, as shown in (9) (see next page), generate all specifiers to the right (all heads being on the left already) (cf. Holmer 1996: 108).

This puts all NP arguments on the right side of the verb and also properly respects their hierarchy for binding. I° would be the appropriate site for the auxiliary-like elements encountered in (8). However, (9) wrongly predicts $NP_{TH} < NP_A$ to be a default order in voices other than AT and THT, contrary to what is usually the case, as (10) from Malagasy shows (Rackowski and Travis 2000: 136) (see next page).

(9)

```
                        IP
                      /    \
                   I'       NP_T
                 /    \
              I°       VP
                     /    \
                  V'       NP_A
                /    \
             V°       NP_TH
```

(10) *Nividian   'ny   renin-dRakoto lamba   aho.*
       PST.CT.buy A   mother-Rakoto clothes   T.1SG
       'I was bought clothes by Rakoto's mother.'

By contrast, Keenan (2000) sacrifices a c-command based account of binding and allows arguments to be introduced into VP in different orders depending on trigger morphology. He provides a number of constituency tests, showing among other things that non-AT verbs can be taken to combine with actors directly[18] and create constituents able to undergo coordination with $V°+NP_{TH}$ units. (11) exemplifies this phenomenon for Toba Batak, as discussed in Sternefeld (1995: 52).

(11) *Diantuk si John jala   manipak si Bob   si   Fred.*
      NAT.hit A J.   and   AT.kick TH B.   T F.
      'Fred was hit by John and kicked Bob.'

The group 2 alternative of GHT keeps the structure in (3) and assumes obligatory V°-to-I° movement. This properly captures default linear order and binding. For (11), GHT can appeal to I'-coordination.

    Example (12a) (Keenan 2000: 43) (see next page), however, shows that an additional landing site for objects hierarchically higher than I' but below the surface trigger position would be needed in the GHT-system. (12b) in addition illustrates that V' or a lower VP excluding the agent, which GHT assume, does not seem to provide a constituent ready for coordination (Keenan 2000: 43) (see next page).

(12) a. *Nividy   sy   namaky   boky roa   Rabe.*
　　　PST.AT.buy and   PST.AT.read book two   T.Rabe
　　　'Rabe bought and read two books.'

　　b. * *Nividianana   Rabe ilay satroka sy/ary Rakoto ny boky Rasoa*
　　　　PST.CT.buy   A.R. that hat   and   A.R.   TH book T.R.
　　　　'Rasoa was bought a hat for by Rabe and a book for by Rakoto.'

It must be counted as an additional weakness of the group 2 analysis, at least in its GHT variant, that the $V°$-to-$I°$-shift across NP_A is motivated only highly theory-internally, i.e. dictated by the way VPs have to be built according to Baker's UTAH, the VP-internal subject hypothesis and X-bar theory. Little evidence has been provided to motivate it independently.[19] TRAVIS even suggests that this kind of $V°$-movement across NP_A may take place on a pre-syntactic level called L(exical)-syntax (cf. Hale and Keyser 2002). However, the following paradigm from Tagalog might actually be interpreted as the right kind of data in favor of $V°$-movement.[20]

(13) a. *Maingat binasa   ng bata   ang   libro.*
　　　carefully THT.read A child T   book
　　　'The/A child read the book carefully.'

　　b. *Maingat ng bata binasa   ang   libro.*

　　c. *Maingat bumasa   ng libro ang   bata.*
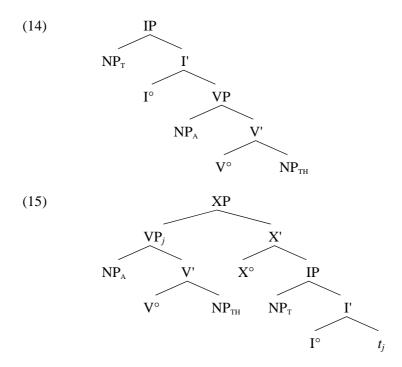　　　carefully AT:read TH book   T   child
　　　'The child read a book carefully.'

　　d. * *Maingat   ng libro bumasa   ang   bata.*

(13d) indicates that shifting an NP across the finite verb is not a general option. Instead, (13a) and (13b) could instantiate the GHT structure with and without $V°$-to-$I°$ respectively. Of course, the position of the adverb would have to be established (see below).

　Following Kayne's (1994) influential work on the "antisymmetry" of syntax, which reduces the possible orders of X-bar theory to *specifier < head < complement* orders exclusively, group 3 analyses regularize the GHT-system in the other direction, as shown in (14) (see next page).

　While this had been taken to be a parametric choice by GHT to distinguish e.g. Malagasy "VOS", (3), from Indonesian "SVO", (14), group 3 adherents assume parametrization to concern the presence or absence of the additional VP-movement step, shown in (15) (see next page).

(14)

```
                        IP
                  ┌─────┴─────┐
                NP_T          I'
                         ┌─────┴─────┐
                        I°           VP
                                ┌─────┴─────┐
                              NP_A          V'
                                       ┌─────┴─────┐
                                      V°          NP_TH
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(15)

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                              XP
                    ┌─────────┴─────────┐
                  VP_j                  X'
             ┌─────┴─────┐         ┌─────┴─────┐
           NP_A          V'       X°           IP
                    ┌─────┴─────┐         ┌─────┴─────┐
                   V°          NP_TH    NP_T          I'
                                                 ┌─────┴─────┐
                                                I°           t_j
```

Obviously, the desired outcome, i.e. a verb initial structure, only results for actor trigger configurations. In other cases, some kind of group-2-style V°-shift across NP_A to some additional landing site still has to be assumed, at least in L-syntax, if one follows TRAVIS. Group 3 adherents tend to point out that (15) most naturally also captures predicate intial structures in verbless clauses like (7b). Therefore, group 3 analyses are often called "predicate fronting" analyses, such as the one presented for Niuean by Massam (2000). As far as word order is concerned, this point is not very compelling though, given that under the GHT analysis in (3), intransitive structures like (7b) would be trigger final, and thus predicate initial, as well.

Now, given the close correspondence between predicate fronting and "VOS" patterns, one might expect a group 2 approach to "VSO" languages. However, group 3 proponents have suggested that predicate fronting is adequate in these cases as well.[21] What is required in addition is that all the arguments vacate the predicate before it fronts as a so-called "remnant" category. This was originally proposed by den Besten & Webelhuth (1990) to account for structures like (16) in German involving contrastive topicalization of a participle and scrambling of the direct object *das Buch*.

(16) [$_{\text{VP}}$ t_i *gelesen*]$_j$ *hat* Hans das   Buch$_i$ *nicht* t_j
            read   has H.   the   book   not
      'Hans didn't read the book.'

As evidenced by the contributions to this volume, the controversy over group 2 and group 3 approaches to Austronesian clause structure is still ongoing. TRAVIS raises the stakes and explores a formal parametrization according to which predicate fronting languages have no NP/DP movement at all. This yields an inverse to V°+DP-movement systems like English. Equally, KAHNEMUYIPOUR & MASSAM make full use of remnant movement in analyzing different word order patterns in the Niuean DP. THIERSCH provides a largely impartial assessment of the various syntactic mechanisms surrounding remnant movement and their application to the problems at hand.[22] As discussed in detail there, among the tools to rein in the descriptive power of remnant movement is the constraint against extraction from specifiers, a.k.a. "freezing" (Culicover and Wexler 1977). Its application has been closely studied wrt the "trigger-only" constraint in Austronesian languages, to which we now turn.

1.3. Unbounded dependencies and the "trigger-only" constraint

Austronesian languages are also famous for the fact that unbounded dependencies (i.e. relative and question formation) involving arguments usually disallow extraction of anything other than the trigger. This has often been interpreted as a "subject-only" restriction, which clashes with typical conceptions of locality built to account for the extractability of direct objects in languages like English and German.[23] Although descriptively the Austronesian pattern nicely fills the extreme (most restrictive) position in Keenan & Comrie's (1977) accessibility hierarchy, formalizing the constraint any further has not been without problems.

  In line with what has been indicated about freezing in section 1.2, various researchers have sought to exploit configuration (15) for an explanation. Thus, as observed by Pensalfini (1995) (cf. Rackowski and Travis 2000: 124–125), if specifiers are islands for extraction, VP movement "freezes" everything but the trigger in its place inside VP. However, as recently discussed in detail by Chung (2005), among the "VOS" languages only Seediq clearly confirms this prediction for VP. For "VSO"

patterns like the ones allowed in Tagalog and Chamorro, O may be outside of VP as well. Consider the following word order permutations from Schachter & Otanes (1972: 83).

(17) a. *Nagbigay   ng libro   sa babae   ang   lalaki.*
          AT.gave   TH book   D woman   T   man
          'The man gave the woman a book.'
      b. *Nagbigay ng libro ang lalaki sa babae.*
      c. *Nagbigay sa babae ng libro ang lalaki.*
      d. *Nagbigay sa babae ang lalaki ng libro.*
      e. *Nagbigay ang lalaki ng libro sa babae.*
      f. *Nagbigay ang lalaki sa babae ng libro.*

In the GHT-system *ang lalaki* is in Spec,VP in (18e)/(18f) and in Spec,IP otherwise. This requires an additional position to the right of Spec,IP, and thus outside of VP, for *sa babae* and *ng libro* in (18b) and (18d) respectively. Nevertheless, non-trigger arguments apparently cannot use such a position to circumvent the freezing condition, i.e. the "trigger-only" constraint still applies, as is shown in (18) (Kroeger 1993: 211).

(18) a. *Sino   ang   nagnakaw   ng   kotse mo?*
          who   T   PERF.AT.steal TH   child your
          'Who stole your car?'
      b. **Sino   ang   ninakaw   ang   kotse mo?*
          who   T   PERF.THT.steal T   child your

Recipients like *sa babae* can undergo "adjunct fronting" though (Kroeger 1993: 44), an issue we return to in section 2.

    At the same time, it is also well known that only trigger clauses are transparent for long extraction (see e.g. Kroeger 1993: 215–217). But, clearly, such a clause would itself be in a specifier (Spec,IP) and is thus incorrectly predicted to be an island for extraction within the freezing account.[24]

    A second approach emerges from the group 3 analysis of the trigger as A-bar operator (Richards 2000, Pearson 2005). Given the observation that in Germanic V2 languages, *wh*-movement and fronting of other constituents into Spec,CP are mutually exclusive, it can be assumed for the putative Austronesian counterpart too that trigger choice and choice of *wh*- or *rel*-extractee must coincide. Technically, this uniqueness is usually

linked to the assumption that CP possesses only a single specifier, an assumption that has been discarded in Split-CP frameworks like Rizzi (1997) or approaches that allow multiple specifiers (Chomsky 1995). As mentioned above, following the earlier *wh*-agreement analyses of Chung (1994) and Georgopoulos (1985), unique specifier-head agreement can be required for licensing the desired trigger-only configuration in the Austronesian case. Extending this account to the transparency of trigger clauses is not as natural though.

There are two approaches that capture both configurations in terms of at least intuitively symmetrical assumptions. First, Nakamura (1998) applies a minimal link metric to extractions. This essentially works because links from and out of a trigger in Spec,IP are bound to be shorter than those from more deeply embedded constituents, as long as the trigger is structurally most prominent. Secondly, Sabel (2002, in preparation.a), building on Keenan's variant of a group 1 approach to head intiality, suggests that triggers are base generated as sisters of V°. It is then possible to apply the classical means of locality theory developed in Chomsky (1986), i.e. L-marking under local government, to account for extractability and transparency of triggers. It is interesting to note that the latter analysis assimilates the trigger to direct objects and is thus closer to the ergative approach to Austronesian voice systems discussed in section 1.1.

There are a couple of challenges to these approaches too, as might be expected. First, the trigger-only restriction must be parametrized, as pointed out by Klamer (2002) citing among others work on Indonesian (Cole and Hermon 1998) and Javanese. Next, there are triggerless constructions, such as the "recent past" construction in Tagalog, which seem to allow extraction of any NP. As long as NPs are hierarchically ordered inside VP, this is not automatically predicted in terms of minimal links.[25] Finally, there are additional complications involving adjunct extraction. These will be dealt with in the following section.

2.   Issues in the syntax of adjuncts and the view from Austronesian

As has been indicated earlier, it can be argued that progress on the three major issues of Austronesian syntax demands that more attention be paid to the syntax of adjuncts. This is in spite of the fact that adjuncts come in such an awe-inspiring number and formal as well as semantic variety.[26] Let us begin by mentioning a potential embarrassment, which, at second glance

may turn out to be of particular further interest. Thus, one of the main exponents of adjuncts, namely, adverbs, seems to be scarcely represented in many Austronesian languages. By this we don't mean the familiar difficulty of establishing a morphosyntactic category "adverb" as distinct from the category "adjective." Although this is an issue as well, e.g. for the analysis of Tagalog, it is more problematic to find that Formosan languages express a lot of meanings that are expressed by adverbs in Indoeuropean languages in terms of auxiliary-like preverbs. Indeed, this seems to be a familiar feature also of Oceanic languages, where "[...] verb phrase modification is often expressed by verb serialization [...] rather than adverbially" (Lynch, Ross, and Crowley 2002a: 87).[27] This is precisely the line of analysis pursued by CHANG for the Formosan language Kavalan.[28] Crucial evidence for the verbal nature of "pseudo-adverbs", as we are going to call these items henceforth, comes from trigger morphology. In fact, an item like *slowly (do)* in Kavalan functions like a finite auxiliary in English in that it bears the "essential" morphology, while the semantically main verb goes into default AT form (CHANG).

(19)   a. *Paqanas=iku   t⟨em⟩ayta   tu   sulal.*
          slow.AT=1SG.T   see⟨AT⟩   OBL   book
          'I read a book slowly.'
       b. *Paqanas-an=ku   t⟨em⟩ayta   ya sulal.*
          slow-THT=1SG.A   see⟨AT⟩   T   book
          'I read the book slowly.'

Tsou differs from this pattern in that the inflected pseudo-adverbs simply agree with the inflection of the main verb (cf. Szakos 1994). CHANG suggests that the formal tool to be explored wrt to Kavalan is complex predicate formation.[29] HOLMER's study of Seediq, dealing with similar facts, can be taken to be complementary in that additional efforts are made to account for the particular placement of pseudo-adverbs (see below).

2.1. Adjunct placement as formal classification and structural indicator

In order to be able to talk about the placement of adjuncts in more theory-neutral terms it is useful to give a rough chart of their whereabouts. In this we follow KAUFMAN's seminal study of adverb orders in Tagalog as well as the classificatory strategy pursued by Bonami, Godard & Kampers-Manhe

(2004). We thus assume four adjunct zones distributed evenly around the main verb, as illustrated in (20).

(20) $[\ldots \alpha \ldots \beta \ldots V \ldots \gamma \ldots \delta \ldots]$

Two of these zones are preverbal. α signals a domain of fronted adjuncts whereas β signals a zone closely in front of the verb. γ and δ are supposed to provide mirror-image counterparts in the postverbal domain. One can think of α as roughly comprising the target domains for Tagalog inversion operations, *ay*-inversion and "emphatic inversion" (cf. Schachter and Otanes 1972) as well as Malagasy *dia*-topicalization. β can be taken to host the Formosan pseudo-adverbs. The left edge of β would thus be constituted by the highest auxiliary, TMA-marker, or negation.[30]

For Tagalog it is possible to map two well known formal adjunct classes onto α and β. Thus, those adverbs that combine with V° through a linking morpheme *na/ng* can be taken to dwell in β while those preverbal ones that disallow the linker are in α. Degree adverbs like *bahagya* ('slightly') belong to the former while temporal adverbs like *kahapon* ('yesterday') belong to the latter class as shown in (21) (Wegmüller 1998: 196–197).

(21)   a.   *Bahagya-ng nagbago*   *ang*   *ministro*
            slightly-LK PERF.AT.change   T   minister
            ng   *kaniyang*   *palagay.*
            TH   his.LK   opinion
            'The minister changed his opinion slightly.'
       b.   *Kahapon*   *niya*   *sinulat*   *ang*   *liham kay*   *Maria.*
            yesterday   3SG.A   PERF.THT.write   T   letter   D   M.
            'Yesterday, she wrote the letter to Maria.'

Both *bahagya* and *kahapon* can attract clitics. For the latter this is actually shown in (21b), where *niya* intervenes between *kahapon* and the finite verb. In the former case there would still be a linker, but it would follow the clitic instead and keep immediately preceding the verb. (23a) below is an example. α will eventually have to be split up in order to allow for fronted adjuncts that don't attract clitics (see below). Crucially, in Tagalog a mirror image of (21) can be mapped onto γ and δ. Thus, close to the verb there can be adverbs like *mabilis* ('fast') which require a linker on their left, while *kahapon* could drift further rightward, again without a linker. What is different though is that γ can be rather freely interspersed with NP

arguments and it is still unclear what would count as its right boundary. For Malagasy, the boundary can, with some hesitation, be taken to be the trigger position.

At this stage it may be useful to briefly consider a Greenbergian perspective on our rough sketch of adjunct zones. Head initiality is usually taken to imply that nothing but TMA-marking particles and auxiliaries precedes the main verb clause-internally (cf. Carnie and Guilfoyle 2000: 10). Dryer's (1992) survey, which accommodates a considerable number of Austronesian languages, is compatible with this prediction and we can interpret the Formosan pseudo-adverbs in zone β to confirm such a view as well. Thus, in Tsou only clitics like *cu* ('already') may enter inside β, while preverbal conjunctive, evaluative, and temporal adjuncts must be treated as peripheral elements in α preceding the highest auxiliary. This is shown for *'oc'ocic'o* ('fortunately') in (22).

(22) a. *'Oc'ocic'o   i-ta   atavey-a*
          fortunately NAT.REA-3SG finally-NAT
          mevcongu   ta   pasuya   'e paicu.
          marry.NAT OBL   P.   T P.
          'Fortunately, Paicu finally got married to Pasuya.'
      b. ? *I-ta   'oc'ocic'o   atavey-a*
            NAT.REA-3SG fortunately finally-NAT
          mevcongu   ta   pasuya   'e paicu.
          marry.NAT OBL   P.   T P.
      c. ? *I-ta   atavey-a   'oc'ocic'o*
            NAT.REA-3SG finally-NAT fortunately
          mevcongu   ta   pasuya   'e paicu.
          marry.NAT OBL   P.   T P.

That (22b)/(22c) aren't fully unacceptable is presumably due to an alternative parenthetical construal of the evaluative adverb.

Dryer (1992: 93) further finds a positive correlation between VO-orders and postverbal manner adverbs. For Tagalog, this is immediately challenged by the alternation in (23) (Wegmüller 1998: 197), where we find *maganda* ('beautifully') in β or γ.

(23) a. *Magandasiya-ng   kumakanta.*
          beautifully 3SG.T-LK   AT.INCOMPL.sing
          'He is singing beautifully.'

b. *Kumakanta*   *siya-ng*   *maganda*
   AT.INCOMPL.sing   3SG.T-LK   beautifully

One way of reconciling (23) with the Greenbergian picture would be to analyze *maganda* as an adjective and *kumakanta* as nominal / participial, given "that ⟨noun,adjective⟩ is not a correlation pair" (Dryer 1992: 96).[31]

The chart in (20) also sketchily represents an important fact about Tagalog, confirmed by KAUFMAN.

(24)   "Generally, greater distance from V is interpreted as wider scope"
     (Ernst 2002: 17)

Like in English this can be interpreted as saying that V° is in or close to its base position. (24) has been shown to hold for Malagasy too by one of the by now most influential studies of Austronesian adverb placement, namely, by Rackowski & Travis (2000) (henceforth R&T).[32] Thus, where Cinque (1999) has diagnosed the continuously descending pattern of adverb types in (25a), ranging from speech act markers [1] via aspectual adverbs like *already* [4] to manner adverbs like *well* [10] for Italian, R&T (2000: 121) have found the closely corresponding sequence in (25b) for Malagasy, with items like *matetika* ('generally') [2], *efa* ('already') [4], *foana* ('always') [8], and *tsara* ('well')[10] (cf. THIERSCH).

(25)   a. $1 < 2 < 3 < 4 < 5 < 6 < 7 < 8 < 9 < 10 < (V°)$

     b. $2 < 3 < 4 < 5 < (3) \; V° \; 10 < 9 < 8 < 7 < 6 \ldots < 1$

R&T took this as confirmation of two theoretical claims. First, finding the Malagasy order closely related to the hierarchy that Cinque (1999) postulated to be universally valid,[33] R&T concluded that the same formal mechanism appealed to there, i.e. base generation of adjuncts in special functional projections must be applied to Malagasy too. Secondly, the postverbal "mirror effect" was taken to correspond to the overall inverse "VOS" pattern displayed by Malagasy. Being adherents of a group 3 approach to head initiality, R&T analyze this as the result of successive predicate fronting, a.k.a. "intraposition" (cf. Pearson 2000).

The more general strategy these approaches are based on was firmly established by Pollock (1989), who took adverb positions as indicators of functional structure. Thus, the famous contrast between English and French

in (26) is argued to show that the French finite verb undergoes a short leftward shift to Agr°, while the English verb stays *in situ*, as shown in (27).

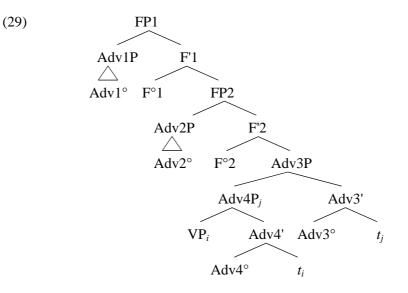(26)   a.   *John often kisses Mary.*
         b.   * *John kisses often Mary.*
         c.   * *Jean souvent embrasse Marie.*
         d.   *Jean embrasse souvent Marie.*

(27)   a.   [$_{AgrP}$ Agr° [$_{VP}$ *often* [$_{VP}$ *kisses Mary*]]]
         b.   [$_{AgrP}$ [*embrasse*$_i$ Agr°] [$_{VP}$ *souvent* [$_{VP}$ t$_i$ *Marie*]]]

In line with this strategy, Cinque (1999: chapter 2) argues on the basis of flexible participle positioning in Italian that between each pair of adverbs in the hierarchy in (25a), there must be a functional X° landing site. As a consequence, adverbs / adjuncts are taken to be base generated in the specifiers of specific, universally ordered functional heads. This is schematically shown in (28).[34]

(28)   . . . [$_{FP1}$ Adv1P [$_{F1}$ F°1 [$_{FP2}$ Adv2P [$_{F'2}$ F°2 [$_{FP3}$ Adv3P [$_{F'3}$ F°3 . . .

The predicate intraposition approach by R&T, however, is in need of phrasal landing sites. They thus assume that, while the preverbal adjuncts behave like the ones in (28), the postverbal ones must be X° heads.[35] An abstract derivation involving two preverbal and two postverbal adjuncts would thus look as in (29) (see next page). The two intraposition steps are (i) VP-to-Spec,Adv4P and (ii) Adv4P-to-Spec,Adv3P. This results in a linear sequence of Adv1° < Adv2° < VP < Adv4° < Adv3°.

   One important point about the R&T system is made by ʜᴏʟᴍᴇʀ. As already discussed, pseudo-adverbs in Formosan languages have substantial head-like properties. They can thus be taken to confirm Cinque's perspective in that they are the spell-out of (some of the) F° categories.[36] However, in Formosan it is exactly the preverbal elements that are most head-like, for example by bearing trigger morphology. We have seen this for Kavalan in (19). Thus, one would expect exactly the preverbal items to be located in F° positions rather than specifiers. The R&T solution is clearly counterintuitive here in turning this evidence upside down.[37]

(29)

```
                        FP1
                     ╱      ╲
                 Adv1P       F'1
                   △       ╱     ╲
              Adv1°  F°1        FP2
                            ╱         ╲
                        Adv2P          F'2
                          △         ╱      ╲
                     Adv2°  F°2         Adv3P
                                     ╱          ╲
                                Adv4P$_j$        Adv3'
                               ╱     ╲          ╱     ╲
                          VP$_i$    Adv4'   Adv3°    $t_j$
                                  ╱     ╲
                             Adv4°     $t_i$
```

HOLMER's own approach starts from the observation that the preverbal vs. postverbal distribution of (pseudo-)adverbs in Seediq is more mixed than the Malagasy one in (25b). In addition, he insists on the X°-nature of pseudo-adverbs. This leads him to postulate the existence of two types of adverbial heads, one class of which shows agreement and does not invite intraposition to their specifiers. Instances of this class end up in preverbal position. The postverbal class behaves exactly the opposite way, i.e. non-agreeing plus inviting intraposition.

Another important point concerns R&T's prediction that all preverbal adjuncts outrank and thus potentially outscope all the postverbal ones. This result could not be replicated for Tagalog, as KAUFMAN carefully shows. Instead, one finds so-called "concentric" scope phenomena, as predicted by Ernst (2002), whose system allows mixed and scopally flexible left and right adjunction. Take (30) as one such example.

(30) *Bigla-ng   na-lulungkot   si Juan lagi.*
      suddenly-LK STA-IMPERF.sad   T J.   always
      'Suddenly, Juan is always sad.' / 'Juan is always suddenly sad.'

Those who follow Cinque (1999) in trying "to reduce optionality to its minimum" (Costa 1998: 106) in the realm of adjunct distribution could claim that *lagi* in (30) obtains a frame reading in the second case, which would correspond to some higher attachment. Finding secure tests to con-

trol for this kind of phenomenon is high on the agenda for future studies of modifier interaction.

We have found a related effect in Malagasy, where at least for some speakers, "anti-mirror readings", i.e. scoping from left to right in the post-verbal domain, seem to be possible. Consider (31).

(31) % *N-amaky   foana   ny   tononkalo izy   intelo.*
         PAST-read.AT   always TH   poem   T.he   three.times
         'He always read the poem three times.'

Given the translation, (31) makes most sense if *foana* scopes over *intelo*, i.e. from γ to δ. However, skeptics might try a frame reading for *intelo* as well, so that the "real" interpretation of (31) turns out to be that on three occasions he always read the poem.
Consider also the following alternation of adverb ordering in Tsou.

(32) a. *i-si   suhc-a   bumemeal-a*
          NAT.REA-3SG   gradually-NAT   carefully-NAT
          yui'ia   to   mo'o na ataveisi.
          examine.NAT   OBL   M.   T results
          'Mo'o gradually examined the results carefully.'
      b. *i-si bumemeal-a suhc-a yui'ia to mo'o na ataveisi.*

Plausibly, this exhibits a subtle shift in meaning. Whereas in (32b) the gradual or stepwise nature of the examination procedure is part of the care taken by Mo'o, in (32a) his care is exclusively directed toward the examination, graduality being an independent outside quality. It is quite unclear whether it is necessary to invoke two versions of *gradually* or *carefully*, as Cinque (1999: 25–27) does for *twice* ("frequentative" vs. "re-petitive"), in order to derive this interpretive variation. Also, trigger-morphology on the pseudo-adverbs indicates that both are part of the ex-tended projection of the main verb. This precludes locating the source of variation in some kind of narrow modification where either *gradually* attaches directly to *carefully* or vice versa (cf. Cinque 1999: 9).
These observations from Austronesian add some further challenges to the program outlined in Cinque (1999). Other objections have been raised, the most obvious one, not necessarily particularly strong, that the system leads to an inflationary number of functional projections (cf. Pittner 1999: 42). Although much has already been written about this recent controversy over

universal adjunct orders (cf. among others the contributions to Lang, Maienborn, and Fabricius-Hansen (eds.) 2003, Alexiadou (ed.) 2004, Austin, Engelberg, and Rauh (eds.) 2004), let us add the following remarks as an aside.

First of all, one of the most important points for Cinque's (1999) system is that it does not dissolve into semantico-pragmatic scoping and modification hierarchies, in contrast to the theory pursued by Ernst (2002). It is thus important that the formal side of the system be made water-tight. Among the formal tools belongs the principle of unique selection of one functional head by another along the full cascade of projections. Whether semantically motivated or not, this is supposed to encode fixed orders. In this light it must be taken to be rather problematic that Cinque (1999: 127) assumes "that AgrPs [...] and NegPs are generable in many different positions among the adverb-related functional projections. It is thus tempting to interpret [...] variation as stemming from a pure 'spell-out' option: whether a language lexicalizes a higher or lower Agr or Neg." The problem is that once the mechanism of functional selection has been thus flexibilized it is much harder to see why languages couldn't equally choose among higher or lower realizations of evidential or modal adverbial expressions. Ruling this out in the latter case but not the former is not fully convincing.

It is equally important to note that among the three arguments against semantic motivation of hierarchical order at least two appear to be spurious right away. Thus, Cinque (1999: 135) suggests that, given the contrast in (33a)/(33b), which shows that an evidential adverb cannot be scoped over by an epistemic one, the acceptability of (33c) is surprising.

(33)   a. *Evidently John has probably left.*
       b. * *Probably John has evidently left.*
       c. *It is probable that it is evident that John has left.*

However, this ignores the structural effect of complementation. In (33c) the state of being evident (for someone) is made the object of a likelihood estimation by the speaker. The adverb *evidently*, however, seems to be unembeddable in that sense. It remains speaker-oriented in (33b) as well as (34), which is equally odd.

(34)   ?? *It is probable that John evidently has left.*

The same effect can be achieved with conditionals. Thus observe the contrast in (35).

(35) a. *If it were evident that John had left, we would do something about it.*
      b. ?? *If John evidently had left, we would do something about it.*

The second argument, concerning the strict ordering of expressions for "prospective" (*soon*) before "proximative" aspect (*almost*) (Cinque 1999: 136), seems to be empirically false, at least for its German rendering *Er wird dann fast bald da sein* ('He will then soon be there, almost'), which may be interpretationally marked but is not ungrammatical. Instead it has a very precise meaning, namely, that at a certain point in the future he will be on the verge of arriving soon. Of course, this is not something one is likely to express very often.[38]

Let us return to the issue of adjuncts as structural indicators. The second type we want to look at concerns XP positions. Thus, it is well-known that so-called "medial adverbs" mark the border across which Scandinavian object-shift takes place (cf. Holmberg and Platzack 1995). This process typically involves a definiteness effect, i.e. only definites and strong indefinites shift in Icelandic (cf. Diesing 1996). The same type of effect has been discovered for Malagasy by Pearson (2000: 331), this time, however, definite objects appear to the *right* of certain adverbs.

(36) a. *Nijinja   vary haingana   ny mpamboly.*
          PAST.AT.cut rice quickly   T farmer
          'The farmer harvested rice quickly.'
      b. *Nijinja   haingana   ny   vary ny mpamboly.*
          PAST.AT.cut quickly   TH   rice T farmer
          'The farmer harvested the rice quickly.'

This is implemented as follows by R&T as well as Pearson (2000). An object-shift projection of type AgrP is inserted between VP and the projection hosting *haingana*. After object-shift has taken place, the remnant VP undergoes intraposition into the specifier of the adverb phrase in question. This is schematically illustrated in (37).

(37) a. [$_{FnP}$ ___ [*haingana* [$_{AgrP}$ ___ [Agr° [$_{VP}$ *nijinja ny vary*]]]]]
      b. [$_{FnP}$ ___ [*haingana* [$_{AgrP}$ *ny vary$_i$* [Agr° [$_{VP}$ *nijinja t$_i$*]]]]]

c. [$_{FnP}$ [$_{VP}$ *nijinja t$_i$*]$_j$ [*haingana* [$_{AgrP}$ *ny vary$_i$* [Agr° *t$_j$*]]]]

Apparently the correct word order for (36b) is derived. (36a) follows if (bare) indefinites are not allowed to undergo object shift.[39] However, recall that the actor, *ny mpamboly*, should be part of VP as well. Thus, once VP moves it will move the actor along into Spec,FnP. But this was assumed to lead to a freezing effect (cf. section 1.3), i.e. the trigger should be trapped inside VP, unable to move to Spec,IP as originally required.[40] THIERSCH discusses the technicalities of these derivations in some detail, laying out the options for how to avoid freezing while allowing cyclic bottom up derivations to be kept intact.

    Another subtle point has to be raised wrt structures like (37) in the light of KAHNEMUYIPOUR & MASSAM. They undertake an examination of Niuean noun phrases, which among other things involves adjective placement wrt numerals, determiners, and possessors. As recently argued by Cinque (2004) in response to criticism by Haider (2000), extending his system to adjective placement inside DP is a natural move, given the possibility that "such complex APs are actually derived from a small clause relative" (Cinque 2004: 689, fn.14). Cinque (2005) then provides a complete formal typology of DP-internal orders derived from applications of as well as constraints on the type of intraposition movement R&T employ. KAHNEMUYIPOUR & MASSAM present a variant of this approach, arguing in particular that the specifics of Niuean DP-internal orders can be captured under two assumptions: (i) filled specifiers cannot be targeted by movement, and (ii) empty projections are invisible for movement and must be skipped.

    With this in mind, it can be asked what happens in the R&T system when there are no overt adjuncts. Assuming absence or invisibility of the relevant projections would have rather unwelcome consequences when there is a definite object like in (36b). After object-shift there would be no VP-intraposition and something like (38) is incorrectly predicted to be acceptable.

(38)   * *Ny vary nijinja ny mpamboly.*

Cinque (1999: 128–130), however, assumes that all FPs are always there, acquiring a default interpretation if phonologically empty.[41] This would prevent (38) from being generated. At the same time, it makes the approach by KAHNEMUYIPOUR & MASSAM less compelling. Subtle as such questions

may be, the theoretical appeal of abstract approaches like theirs lies in formal precision and elegance. These qualities enhance predictive power and justify, more than anything else, the appeal to formalities, as originally argued by Chomsky (1957) when launching the generative enterprise.

Adjuncts serve an additional function as structural indicators that has been formulated in terms of adjunction constraints. Thus, in Germanic V2-languages contrasts in adverb placement like the one in (39) have been captured by allowing adjunction to IP but disallowing adjunction to CP (cf. Vikner 1995).

(39) a. . . . *dass* [IP *gestern* [IP *der   Minister angerufen   hat*]]
              that   yesterday   the   minister called   has
              'that the minister called yesterday'
      b. * [CP *Gestern* [CP *der   Minister hat   angerufen*]]
              yesterday   the   minister has   called

In the GHT-system in (3), an adjunction constraint may have to be imposed on VP in order to account for strict adjacency between the finite verb in I° and non-trigger actors or bare theme arguments in Malagasy.[42] For the case of theme arguements an example is shown in (40) (Paul 2004: 224).

(40) a. *Mamitaka   ankizymatetika Rabe.*
              AT.trick   child   often   T.Rabe
              'Rabe often tricks children.'
      b. *Mamitaka matetika ankizyRabe.*
              AT.trick   often   child   T.Rabe

For actor arguments, as shown in (10) above, this adjacency effect has come to be known as "N-bonding" (Keenan 2000), as it is accompanied by morpho-phonological adjustments. In the R&T-approach, on the other hand, no adjunction constraint is necessary. Adjacency follows directly as long as arguments stay inside VP, given that all adjuncts are introduced in higher functional projections.[43]

2.2. Adjuncts and extraction

Let us finally return to unbounded dependencies (cf. section 1.3). We have already seen in (21) that fronting can serve to differentiate adjuncts in

Tagalog. A summary of possibilities, partly already documented by Schachter & Otanes (1972), is given in Wegmüller (1998: 201). Thus, for example, lower adverbs expressing frequency, degree, and manner are excluded from *ay*-inversion, while temporal, locative, modal, evaluative, conjunctive and speech-act adverbials allow this transfer to the α zone freely. Consider the contrast in (41). (41a) is taken from Schachter & Otanes (1972: 488), (41b) from Wegmüller (1998: 200).[44]

(41) a. * *Palagi   ay namimili   sila   dito.*
          always   AT.INCOMPL.go.shopping T.3PL here
          'They always go shopping there*.*'
      b. *Tiyak   ay   pupunta   si Pedro   sa handaan.*
         certainly   AT.CONT.go T   D   party
         'Pedro will certainly go to the party'

A similar divide between "VP-adjuncts" and "S-adjuncts" in Chamorro has been argued for by Chung (1998: chapter 9) on the basis of *wh*-movement and the presence vs. absence of binding-theoretic principle C violations under reconstruction.

Chung (1994, 1998) has been equally pioneering in the documentation of an argument vs. adjunct asymmetry for extraction from syntactic islands in Chamorro. Accordingly, "[...] adjuncts [...] are completely ineligible for long movement" (Chung 1998:355), as the contrast in (42) (see next page) shows.

For arguments, Chung (1994, 1998) was able to defend a variant of the approaches by Rizzi (1990, 1991) and Cinque (1990), according to which the extraction behavior of referential expressions is more liberal.[45] Thus, only referential items like *hafa kareta* ('which car') in (42b) can escape islands. In addition these expressions can exceptionally create unbounded dependencies in Chamorro without inducing *wh*-agreement morphology on the heads along the extraction path. Schematically, this is shown in (43) (see next page).

(42)   a. * *Asta ki chatängmak guäha   planu-ña*
          until   midnight AGR:exist plan-AGR
          si Antonio [*pära u-fan-istudia   t*]
                  FUT   AGR-AP-study
          'It's until midnight that Antonio has a plan to study.'

       b. *Hafa   na   karetaguäha   mayulang   ramienta*
          which   LK   car   AGR.exist   broken   tool
          [*in-isa   u-fan-istudia   t*]
             AGR-use AGR-AP-study
          'Which car were there some broken tools that you used (so as) to fix?'

(43)   a. $WH_{+REF} \ldots +AGR^{WH} \quad \ldots [\ldots +AGR^{WH} \ldots t]$
       b. $WH_{+REF} \ldots -AGR^{WH} \quad \ldots [\ldots +AGR^{WH} \ldots t]$
       c. $WH_{-REF} \ldots +AGR^{WH} \quad \ldots [\ldots +AGR^{WH} \ldots t]$
       d. * $WH_{-REF} \ldots -AGR^{WH} \quad \ldots [\ldots +AGR^{WH} \ldots t]$

Interestingly, Donohue & Maclachlan (1999) challenge Chung's view of *wh*-agreement. They suggest an analysis as (a historical remnant of) trigger morphology.[46] Under this perspective, the lower $+AGR^{WH}$ would be a reflex of the familiar "trigger only" constraint. It's higher counterpart would indicate the trigger status of the subordinate clause. It would then follow that only referential arguments can extract from a non-trigger clause, (43b) vs. (43d). Attractive though this reanalysis may be it raises another problem: sentence adjuncts, which otherwise cannot extract from islands, as we have seen, are capable to move without inducing $+AGR^{WH}$ in the higher clause, i.e. capable to extract from a non-trigger under Donohue & Maclachlan's (1999) perspective. This is shown in (44), taken from Chung (1998:362).[47]

(44)   *Gi   manu   na   man-malägu   siha*
      LOC   where   COMP AGR-want   they
      [*na   pära u-fan-aligao   un nuebo na karetat*]
        COMP FUT   AGR-AP-find   a   new   LK car
      'Where do they want you to look for a new car?'

Adjunct extraction is also highly relevant to the freezing account of the trigger-only constraint, as pointed out in Chung (2005). Citing data from Aldridge (2002), she interprets the following contrast from Seediq as

evidence that locative adverbials must remain inside the intraposed, and thus frozen, extension of VP.

(45)   a. * *Inu*   [*m-n-ari*   *patis*]   *Ape?*
            where   ANTI-PERF-buy book   A.
       b. [*M-n-ari*   *inu*   *patis*]   *Ape?*
            ANTI-PERF-buy where   book   A.
         'Where did Ape buy books?'

Chung (2005: 19–20) further discusses evidence from Malagasy showing that instrumental, locative and temporal adjuncts here must be able to attach higher, given their extractability as non-triggers.[48] But even the Seediq facts are more complicated. Thus, temporal adjuncts, which behave like the locatives in (45) wrt question formation (Holmer 1996: 85) freely occur after the trigger in declaratives, i.e. in the δ zone, as shown in (46) (Holmer 1996: 53).

(46)   *Meyah   Hori   Pawan   kusun.*
       come.AT H.   T.P.   tomorrow
       'Pawan will come to Hori tomorrow.'

As already pointed out in section 1.3 wrt non-trigger arguments in Tagalog, it is unclear under the freezing approach why this peripheral position cannot be used as an escape hatch for producing structures like (45a). In fact, Holmer (1996: 54) points out that the adverb shows up in γ in (47), which functions naturally as an answer to the question *When did Pawan buy sweet potatoes?*, "to stress the information in the temporal adverb."

(47)   *Mnari   ciga   bunga   Pawan.*
       buy.PRET   yesterday   sweet potatoes T.P.
       'Pawan bought sweet potatoes yesterday.'

It is thus possible to conclude that γ is a focus position in Seediq and that *wh*-adjuncts like *inu* ('where') have to target a focus position in constituent questions.

   This evidence fits in nicely with the debate about whether *wh*-questions in Austronesian languages are formed via direct extraction or clefting. It is well known that Tagalog displays a clear asymmetry in this respect. Thus (18a) can actually be translated more adequately as *Who is the one that*

stole your car? Structurally, the *wh*-phrase constitutes the predicate in an equational pseudo-cleft construction, the *ang*-marked clausal residue being a headless relative clause. Crucially, adjunct extraction in Tagalog works differently. Consider (48).

(48) *Saan   ka   pupunta?*
       Where   2SG.T   AT.CONT.go
       'Where are you going?'

Instead of combining with a headless relative, adjuncts extract directly via "emphatic inversion" (Schachter and Otanes 1972). Like the temporal adverb in (21b), the locative one in (48) attracts clitics across the main verb. Argument *wh*-expression in structures like (19a) cannot do this. What we see here are obviously two strategies for focusing *wh*-expressions.

   One of the deeper questions is why things are the way they are in Tagalog and why they couldn't be the other way round, i.e. why arguments do not extract directly and adjuncts don't combine with headless relatives?

   One part of this puzzle is actually much clarified by studying POTSDAM's discussion of *wh*-constructions in Malagasy (cf. TRAVIS). Following Paul (2001), he assumes these structures to be uniformly clefted. Interestingly, he uses adverb positioning as structural indication that the *wh*-expression in (49b) must be in a predicate position.

(49) a. *Mihomehy (foana) Rasoa   (* foana).*
          laugh.AT   always T.Rasoa
          'Rasoa is always laughing.'
      b. *Iza   foana   no   mihomehy?*
          Who always PRT laugh.AT
          'Who is always laughing?'

(49) shows that *foana* can only appear between predicate and subject. Applied to (49b) this suggests that *iza* is a predicate and *no mihomehy* a headless relative. However, there are two immediate concerns. First, *no* does not otherwise function as NP marker, the proper determiner being *ny*. Secondly, as noted by Paul (2001: 719), adjuncts can be fronted in the same construction without having to become trigger first. As we already argued above, this must count as a violation of the "trigger only" constraint. She goes on to suggest that in these cases the putative subject may be reinterpreted as an event nominal. Now, although this may work for local

structures it fails for long extraction. Thus, while (50a) could well be interpreted as saying that the event of Bakoly's cutting grass instrumentally involved a knife, (50b) does not mean that the event of Piera's thinking that Bakoly was cutting grass instrumentally involved a knife.

(50) a. *Amin'ny   antsy no manapaka bozaka i   Bakoly.*
          P.GEN.DET knife PRT AT.cut   grass   T B.
          'The event of Bakoly cutting grass involved a knife.'
      b. *Amin'ny   antsy no   heverin'   i   Piera*
          P.GEN.DET   knife PRT THT.believe A P.
          fa   manapaka bozaka i B.
          that AT.cut   grass   T B.
          'It is with a knife that Piera believes that Bakoly cut the grass.'
          (# 'The event of Piera believing that Bakoly cut grass involved a knife.')

Paul (2001) indeed considers an alternative according to which there could be a double analysis, one involving clefts for arguments and one involving direct extraction for adjuncts. It would, of course, be more elegant to have independent evidence for that like in Tagalog. Law (2005) identifies another challenge for Malagasy *no*-extraction as clefting. This has to do with the possibility of extracting strong quantifiers like *most boys (ny akabetsahan'ny zazalahy)*, which otherwise are impossible as predicative NPs. This leaves POTSDAM's original observation about adverb placement as something of a puzzle.[49]

3. Conclusion

We hope that our discussion has demonstrated the relevance and (heuristic) potential of studying Austronesian syntax in the light of the syntax of adjuncts. Thus, for example, what we have called their function as structural indicators has a clear dialectic.[50] It serves as identifying otherwise hidden structure and at the same time defines formal, i.e. distributional, adjunct classes. This complements semantic classification in a fruitful and thought-provoking way.

We are also optimistic that the papers of this volume are excellent proof of the assessment made by Austin, Engelberg & Rauh (2004: 39-40) that "[s]ignificant modifications to theories of adverbial positioning are likely to

be in store when data from a broader range of languages is treated less peripherally."

Notes

1.   See for example the recent survey carried out by Klamer (2002).
2.   Except for minor adjustments we have kept abbreviatory conventions of the works we cite.
3.   The data go back to work by Paul Schachter and colleagues. See the references cited in Sternefeld's paper.
4.   To the extent that "[w]estern Austronesian languages are generally not case-marking languages" (Himmelmann 2005: 144), this has to be taken as abstract Case.
5.   See Wechsler & Arka (1998) for an argument structure based variant of this approach within the framework of Head-Driven Phrase Structure Grammar (HPSG), dealing with similar facts from Balinese.
6.   This may be taken as a step toward formally implementing the suggestion in Himmelmann (2005: 159) that "one would need a superordinate parameter which distinguishes languages with clear-cut transitivity distinctions from those where transitivity is less clearly manifest in the morphosyntax". GHT (1992: section 4) discuss this issue in terms of "a typology of passive".
7.   It is quite instructive to note, as has been done by Wegmüller (1998: 56-57), that an ergative RG-analysis of Philippine-type voice seems to be forced to resort to a non-standard 1-2-1 demotion-promotion sequence for actors in anti-passives, in order to push the theme argument into "chômage" and detransi-tivize the structure. This then allows assignment of absolutive to the actor (= intransitive 1), the theme no longer counting as transitive 2.
8.   Such a split in ergativity (THT = ergative, AT = accusative) is assumed for Balinese by Wechsler & Arka (1998).

9. See also the critical discussion of ergativity as applied to Austronesian languages in Himmelmann (2005: 158–159, 2002: 15).

10. This is reflected in use of the terms "topic" or "focus" instead of trigger, which can be found in many (earlier) studies of Austronesian languages. See also CHANG.

11. For recent discussion of fronting in German and further references, see Frey (2004).

12. See Donohue & Maclachlan (1999) for some critical discussion and Rackowski & Richards (2005) for a reformulation of the same idea in terms of Chomskyan phases (Chomsky 2001).

13. References to chapters of this volume are made by using the author's last name in small capitals.

14. See Sportiche (1996) for the specific theoretical background on cliticization.

15. Klamer (2002: 949) briefly discusses the issue of clitics taking over core argument functions in a number of Austronesian languages. For examples from Fijian and Selayarese, see Clark (1987) and Finer (1997), respectively.

16. For further discussion of this kind of structure, see Law (2005). One might view the GHT analysis of circumstantial voice as raising additional pertinent questions here, given that there, forms like *an-sasa-na (CT-wash)* are taken to be composed of the AT morpheme *an* and the THT morpheme *na* (Guilfoyle, Hung, and Travis 1992: 381-382). In the new system of TRAVIS this could be reinterpreted as two verbal clitics licensing two empty pronominals bound by two triggers. Consequences of this would have to be explored.

17. The sketch in section 1.1. is very rough indeed. Further considerations are way beyond our concerns and abilities. Thus, we won't be able to do justice to work on aspect that has been brought to bear on Austronesian voice by Latrouite (2001). For a wealth of further discussion, see also Wouk & Ross (eds.) (2002).

18. For evidence in the same direction from Totoli, see Himmelmann (2005: 143).

19. Aldridge (2004) discusses some rather involved facts from Seediq, supposed to imply the necessity of verb movement to T°, which takes place unless pre-empted by base generation of an auxiliary or blocked by negation. These facts certainly deserve closer attention. At first sight though it seems that the possibility of "lowering" inflection rather than V°-raising may be at issue. This is usually argued to alternate with *do*-support in English (*does not prove* vs. *proves*). See also the discussion in HOLMER.

20. Our own data stem from field work by Paul Law (Tsou) and Joachim Sabel (Malagasy), as well as work with local consultants by Paul Law (Malagasy, Tagalog), Joachim Sabel (Malagasy) and Hans-Martin Gärtner (Tagalog).

21. Pearson (2001) suggests that the tendency toward prefixing instead of suffixation is the reason why movement may be different in Austronesian, preferring XP- over X°-movement. This makes sense in the framework of Kayne (1994), which bans right-adjunction but allows left-adjunction. See, however, Otsuka (2005) for application of X°-movement plus right adjunction to Tongan and THIERSCH for some further discussion.

22. Head initial structures and the group 2 vs. group 3 debate takes up much of the collections by Carnie & Guilfoyle (eds.) (2000) and Carnie, Harley & Dooley (eds.) (2005), which include a high number of Austronesianist contributions. We refer the reader to these volumes for details.

23. See for example the system of Chomsky (1986) with its heavy reliance on head – and L-marking, a relation requiring government, typically under sister-hood.

24. Kroeger's (1993) own account is basically just a restatement of the facts in that it stipulates exclusive extractability of and out of constituents that bear the GF "subject".

25. Nakamura (1998) derives these facts on the basis of additional assumptions about which kinds of structures compete with and / or block each other in an economy based syntactic framework.

26. See van der Auwera (1998: 3), who explains the "scarcity of adverbialist typology" by means of the observation that "as a partial result of the elusive-ness and vastness of the category, grammars often have little to say about matters adverbial". Reluctantly, we will have to leave semantic issues almost entirely aside. See Eckardt (1998) and papers in Lang, Maienborn & Fabricius-Hansen (eds.) (2003) for some recent studies.

27. Of course, adverbs like *maybe* and Swedish *kanske* ('can happen') bear wit-ness to similar phenomena in Germanic. Likewise, the idiomatic way of saying *usually do* in Swedish would be *bruka göra*, using two verbs. Another way of expressing aspectual and degree modification, of course, is reduplication, which is a morphological hallmark of Austronesian languages not to be neglected in this connection. An eventual typology of adverbiality (cf. Bisang 1998) will have to look at the trade-off between these kinds of strategies.

28. For Seediq and Paiwan, see Holmer (1996: 54) and Egli (1990: 158), re-spectively.

29. While sharing nominal arguments, a single set of tense-aspect-mood, and negative markers are criteria fulfilled by Kavalan pseudo-adverbs, it is less clear whether they and their modifiees have "meanings that are not fully pre-dictable from the meanings of their constituent verbs", a criterion put forward for Oceanic verb serialization by Lynch, Ross & Crowley (2002b: 46). This article is full of additional information about the status of verb serialization.

Thus, "[i]n certain languages of central Vanuatu, verbs which occupy the second slot in a serial construction appear to be becoming restricted to that structural slot alone. In some of these languages, these forms can better be analysed as adverbial constituents within a structurally expanded verb phrase" (2002b: 48). It is also tempting, although highly speculative, to relate the phenomenon of temporally inflected adverbs in Malagasy (Sabel in preparation.b) to their origin in the *β* zone of an earlier serializing stage of Malagasy. See Potet (1992) for some related observations about Tagalog.

30. KAUFMAN discusses a number of adverbial clitics in the *β* zone of Tagalog, wondering about the fact that they order roughly like their full fledged counterparts elsewhere (see also Billings 2005). This may be solved by the assumption of independent LP-rules as is standard in frameworks like LFG. See Sells (2001) for an application to the order of Scandinavian adverbs.

31. For discussion of lexical vs. syntactic categories in Tagalog, see Himmelmann (to appear).

32. This study is based on findings by Rackowski (1998) and Pearson (1998) and has found parallel discussion in Pearson (2000).

33. The study in Cinque (1999), although drawing heavily on evidence from Romance languages, is based on a survey of a large number of genetically un-related languages, among them a small sample of Austronesian languages like Anejom, Malay, Samoan, and Tokelau (Cinque 1999: 159–160).

34. Leaving adverb orders in tact is a good diagnostic for verb movement. This is confirmed by German V2 patterns. Thus, the temporal adverb *gestern* ('yesterday') preferably precedes the manner / degree adverb *gründlich* ('thoroughly') in both V2 (*Hans las das Buch gestern gründlich*; 'Hans read the book thoroughly yesterday') and V-final (*dass Hans das Buch gestern gründlich las*; 'that . . . ').

35. One disadvantage of this assumption is the fact that semantic selection by adverbs (*independently from our efforts*) (Alexiadou 1997: 5) can no longer be regulated by direct complementation. Likewise it is unclear how to structurally accommodate modifiers of adverbs (*She danced more beautifully than anyone else*). The same points affect the approach to adjective placement in KAHNEMUYIPOUR & MASSAM.

36. See Cinque (1999: chapter 3) for the importance of this kind of evidence stemming from particles and affixes.

37. If Adv1° and Adv2° were heads and Adv3° and Adv4° located in specifiers, R&T would seem to predict the order *3 < 4 < V° < 2 < 1*. Whether this is a possible order would have to be established.

38. Further challenges have to do with the possibility of recursive modification by one and the same adverb. See Frey & Gärtner (2002) for one case in point.

39. R&T (2000: 138) challenge Keenan's (2000) group 1 approach to head initiality exactly on the assumption that indefinites cannot undergo object-shift. It is crucial for that argument to go through that *two books* in (12a) does not count as indefinite in the required sense.

40. See Rackowski (1998) for a rather technical solution.

41. Whether this makes sense semantically is a difficult question. Thus, a phrase determining the time-course of an event, such as the projection hosting *slowly*, seems to be out of place for stative predicates (# *They slowly know that the king of France is bald*). Cinque (2005: 326) further departs from the R&T approach in that "'head' movement and 'remnant' movement will have to be unavailable". At least the latter type of movement has figured prominently in R&T's account of object shift.

42. For similar facts in Toba Batak and Totoli, see Sternefeld (1995) and Himmelmann (2005), respectively.

43. The R&T-approach to adverb placement has found an additional substantial and non-trivial application in the domain of ellipsis by Travis (2005). See also Cinque (1999: 132) for structural adverb classification in terms of ellipsis. Another structural assumption about adjuncts is that they aren't governed by the verb. This has been confirmed for Niuean adjuncts in Baker (1988: 87) from which noun incorporation is banned. Conflicting evidence in Greek has been discussed by Rivero (1992).

44. It is beyond the scope of our discussion to go into the information-structural properties of *ay*-inversion. See Kroeger (1993) for some remarks.

45. The exact nature of "referentiality" is still a matter of controversy. See Pesetsky (1987), Chung (1994), Frampton (1999), and Szabolcsi & Zwarts (1997) for some further debate. Voskuil (2000) has been able to show referentiality effects for quantifier subextraction from weak islands in Indonesian. Other phenomena involving adjuncts and islands have remained unexplored. Thus, adverbs of quantification can induce intervention effects for *wh*-in-situ in the sense of Beck (1996).

46. See, however, Zobel (2002: 412) for conflicting evidence.

47. The agreement marker on *man-malägu* ('want') is not *wh*-agreement. We have simplified glossing. Chung (1998) provides a rather technical solution to this phenomenon having to do with the possibility of extracting without traces and LF "trace sprouting". It remains to be seen whether the CLLD-based approach outlined in TRAVIS can be extended to the full range of cases discussed above.

48. Arguments for different attachment sites could be further refined if one follows Chung (2005: 26–27), who shows that in Chamorro "[...] nonsubject arguments and adjuncts can be realized as negative concord DPs, but subjects cannot".

49. See Law (2005) for further discussion and a biclausal solution. The debate about Malagasy *no* constructions is further complicated by the existence of multiple frontings involving adjuncts, a.k.a. "bodyguard" extraction (Keenan 1976a). Again conflicting proposals have been put forward by POTSDAM, Paul (2001) and Sabel (2003), among others. These remain to be explored. See also Wegmüller (1998) for a preliminary exploration of multiple frontings in Tagalog.

50. Another curious use of this technique involving adjuncts concerns Proto Oceanic (POC): "There is another reason for thinking that POC was verb-initial. [. . .] it seems that in the period after the break-up of POC, adverbial elements which had the whole clause in their scope were easily procliticized to the verb phrase, which must have followed them directly. Since such adverbials are more likely to have occurred clause-initially than – medially, it is reasonable to infer that the verb was clause-initial." (Lynch, Ross, and Crowley 2002a: 86)

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