Austronesian 'Focus' as Derivation:
Evidence from Nominalization[*]

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This paper adds data from nominalizations to support the thesis that Formosan and Philippine 'focus inflection' is lexical derivation whereby verbs assign various perspectives to the situations they encode. The Formosanist terms 'AF' and 'NAF' refer to intransitive and transitive verbs respectively, and once this is recognized, almost all Formosan languages turn out to be grammatically ergative. The grammatical framework used in analyzing the data is a combination of dependency grammar and seamless morphology.

Key words: agreement, derivation, ergativity, focus, inflection, nominalization, recentralization, transitivity, voice

1. Introduction

Austronesian 'focus' is commonly described either as 'voice' or as a kind of subject-verb agreement morphology with the verb agreeing with the grammatical subject in theta-role. However, the evidence has been available for a long time that these analyses are not correct, and that Austronesian focus is neither voice inflection nor agreement inflection but rather lexical derivation. Data from the nominalization workshop that was held at the Academia Sinica on Oct. 21-22, 2000 add clinching evidence for this position. In this paper, I shall summarize the evidence and arguments.

2. Definitions

All statements in this paper about word form-meaning or form-distribution correlations will assume the seamless morphology framework:

Seamless morphology: Words do not have internal grammatical structure. There are no free or bound morphemes, and no morpheme boundaries. No grammatical rule can

refer to the inner composition of a word, and no phonological rule can refer to a morpheme boundary. Correlations between word shape and word meaning or word distribution are stated in terms of analogical patterns called 'word formation strategies'. (cf. Ford et al. 1997, Singh and Starosta, to appear)

Derivation: If two words W_a and W_b are related by derivation,

a) They are partly identical in form, and differ in that one shape element C_a^1 (e.g., a string of phonemes) characterizes W_a and another C_b characterizes W_b.

b) They differ from each other in one or more semantic and/or distributional features F_a (on W_a) versus F_b (on W_b).

c) The lexicon contains other pairs of words related in the same way, differing in the same shape elements and lexical features.

It is not necessary for W_a and W_b to belong to the same syntactic class, and typically they do not.

Word Formation Strategy: A derivational relation can be represented in terms of an analogical Word Formation Strategy. For example, WFS-1 describes the relation between ..*ic*] adjectives and ..*icity*] nouns:

WFS-1.

$$[\text{Adj }] \quad : \quad \begin{bmatrix} \text{N} \\ +\text{bstr} \end{bmatrix}$$

$$\text{V́Cɪk}] \quad : \quad \text{VCɪ́sɪti}]$$

That is, corresponding to an adjective with penultimate stress and ending in orthographic ..*ic*, there may be an abstract noun ending in ..*icity*, and vice versa. WFS-1 describes a derivational relationship between pairs of words *electric* : *electricity*, *toxic* : *toxicity*, etc., but the relation is non-directional, so that there is no formal support for a statement such as '*electricity* is derived from *electric*'. Derivation is NON-PRODUCTIVE, so that words which match one term of the WFS will not necessarily have a counterpart having the properties characterized by the other term: *frantic* : **franticity*, *chiropractic* : **chiropracticity*, **triplic* : *triplicity*, **simplic* : *simplicity*, **infelic* : *infelicity*, etc. Features not explicitly mentioned in the WFS (e.g., semantic features) are assumed to be present in both pairs of related items.

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[1] C for 'constant'.

Inflection: If two words W_a and W_b are related by inflection,

a) They belong to the same syntactic class or subclass K.

b) They are partly identical in form, and differ in that one shape element C_a (e.g., a string of phonemes) characterizes W_a and another C_b characterizes W_b.

c) They differ from each other in one or more semantic and/or distributional features F_a (on W_a) versus F_b (on W_b).

d) The entire set K is exhaustively partitioned into subsets p_i ('paradigms') such that each paradigm contains two words related to each other in the same way as W_a and W_b.

e) Every pair of words in the paradigm is related by one of a list of Word Formation Strategies.

f) The same list of word formation strategies applies to each paradigm in K.

To paraphrase, if a syntactically defined class or subclass is exhaustively composed of subsets of words (or PARADIGMS), such that the words in each paradigm are related to each other by a single set of Word Formation Strategies (disregarding the shapes of the constants), then each word in each such paradigm is INFLECTED. The constants that appear in the WFSs correspond approximately to affixes or bound morphemes in IA (Item and Arrangement) morphology.

To cite a simple example, the class of count nouns [N, –mass] in English is exhaustively divided into sets, each set containing two members, W_a and W_b. One is singular and implies a singular determiner (i.e., F_a = [–plrl, ?[Det, –plrl]]) and the other is plural and allows a plural determiner (i.e., F_b = [+plrl, ?([Det, +plrl])]). Given one member of the paradigm, the other is predictable, though there are several possible shapes it might take. This is stated as a WFS:

WFS-2.

$$\begin{bmatrix} \text{N} \\ \text{–mass} \\ \text{–plrl} \\ ?\begin{bmatrix} \text{Det} \\ \text{–plrl} \end{bmatrix} \\ \text{V]} \end{bmatrix} \quad : \quad \begin{bmatrix} \text{N} \\ \text{–mass} \\ \text{+plrl} \\ ?(\begin{bmatrix} \text{Det} \\ \text{+plrl} \end{bmatrix}) \\ \text{Vz]} \end{bmatrix}$$

This is the default rule for all vowel-final nouns. It can be read in either direction, e.g., corresponding to every plural count noun that ends in ..Vz], there may be a

singular count noun that ends in ..V]; e.g., *trees*, *tree*. Note that both sets of words must belong to the same syntactic class, and that every word in the class differs from one other word in the same features. The characteristic shapes, in this case ..z] on the plural, are unique to this inflected form, and are not carried over when a word is derived into a different syntactic class.

The properties of inflection and derivation are compared and contrasted in Figure 1:

(1) Inflection versus derivation

INFLECTION			DERIVATION		
1. Does not change syntactic class			Typically changes syntactic class		
$[go]_V$	:	$[goe\underline{s}]_V$	$[calm]_{Adj}$	:	$[calm\underline{ly}]_{Adv}$
$[talk]_V$	:	$[talk\underline{ed}]_V$	$[care]_N$	:	$[care\underline{ful}]_{Adj}$
$[book]_N$	:	$[book\underline{s}]_N$	$[calm]_{Adj}$	:	$[calm\underline{ness}]_N$
			but sometimes does not:		
			$[dress]_V$	:	$[\underline{un}dress]_V$
			$[happy]_{Adj}$	:	$[\underline{un}happy]_{Adj}$
2. Changes meaning in a regular way			May change meaning in an unpredictable way		
talk	:	*talk<u>ed</u>*	*destroy*	:	*destroy<u>er</u>*
walk	:	*walk<u>ed</u>*	*mix*	:	*mix<u>er</u>*
3. Is almost always productive			Typically unproductive; rarely does derivation apply to every word that fits the pattern		
talk	:	*talk<u>ed</u>*	*solid*	:	*solid<u>ify</u>*
walk	:	*walk<u>ed</u>*	*heavy*	:	**heav<u>ify</u>*
scrunge	:	*scrung<u>ed</u>*	*terror*	:	*terror<u>ize</u>*
blurg	:	*blurg<u>ed</u>*	**ostrac*	:	*ostrac<u>ize</u>*
4. Inflection has external syntactic consequences; it is typically involved in agreement			Derivation is not involved in agreement phenomena		
this boy	:	*these boy<u>s</u>*	—		
*this boy<u>s</u>	:	**these boy*	—		
5. Derivational WFSs do not relate overtly inflected forms; that is, inflection is the outer layer of word formation			Derivational WFSs may relate overtly derived words		

terror	[N]		*true*	[Adj]
terror<u>s</u>	[N]		*truth*	[N]
**terror<u>ize</u>*	[<u>V</u>]		*truthful*	[Adj]
			untruthful	[Adj]
			untruthfulness	[N]

6. Inflection forms a paradigm, a set of words that can substitute for each other in the same position in a sentence

Derivation creates new words that typically do not substitute for each other in the same position in a sentence

the ⎡girl⎤ ⎡walks⎤ home   The ⎡clever⎤ boy spoke ⎡calmly⎤
   ⎢girls⎥ ⎢walk ⎥   * ⎣calmly⎦   ⎣clever⎦
   ⎣   ⎦ ⎣walked⎦

3. Previous analyses

THE COMMON ASSUMPTION: Austronesian 'focus' is inflectional morphology marking either subject-verb agreement or 'voice'.

3.1 Focus as <u>voice</u>

Formosan and Philippine 'focus' is often referred to as a type of grammatical voice. Among those using this term in recent years have been Robert Blust,[2] Resty Ceña,[3] Yung-li Chang,[4] Charles DeWolf 1988, Lillian Huang,[5] Edward Keenan,[6] Christopher

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[2]   'In the more common view, as exemplified by Wolff (1973) all of these affixes except *-in- functioned as ***voice markers**[2]* (VM) in the verb....'" (Blust 1995, emphasis mine)

'I think one reason that 'focus' has been so hard to analyze in Philippine and Formosan languages is that it contains elements of both case and *voice*, phenomena which are clearly distinguished in Indo-European languages' (Robert Blust, email, 05 May 1999, emphasis mine).

'The fact that a four-focus system breaks down into an active/passive voice system in many parts of western Indonesian could be taken as evidence that **'focus'** is **voice-marking**, as most linguists since Bloomfield (1917) have maintained' (Robert Blust, email, 05 May 1999, emphasis mine).

[3]   'The verb carries objective *voice*, but the apparent subject is agent' (R. Ceña, email, emphasis mine).

[4]   'The paper deals with the morpho-syntactic aspects of the focus system in Seediq. The term focus here refers to grammatical voice rather than ordinary focus' (Chang 1999:615-616,

Manning,[7] Lawrence Reid,[8] Peter Sells 1995, John Verhaar 1988, and Zeitoun, Huang, Chang, Wu, Yeh and Tan 1999, and has also been adopted in some Chomskyan analyses.[9]

According to William O'Grady (O'Grady 1997:107),

> 'Voice is the term used to describe the grammatical system concerned with the correspondences or 'mapping' between thematic roles and grammatical relations, especially the subject relation. The most widely used voice category in most languages is the active, in which the agent role (if present) must be linked to the subject.'

The venerable analysis of Tagalog as having an active and three passive constructions[10] seems to fit this characterization fairly well, but the application of the term to Formosan

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emphasis mine).

Fn 1: 'For identifying focus in Seediq as grammatical **voice**,' see Chang (1995c:81), emphasis mine.

[5] 'Atayal has a very complex verbal morphology. The following are the verbal affixes that are often seen: *m* (*m-* or *-m-*), *s-*, p-, *-(i)n-*, *-un* and *-an*. Among these affixes, *m*, *-un*, *-an* and *s-* are regarded as the basis of the formation for the Atayal *VOICE* system' (Huang 1993).

[6] 'The Ss in (1) below constitute a very partial illustration of the *voicing* system of Malagasy' (Keenan 1996:92, emphasis mine).

[7] 'It was mentioned in the last chapter that the pivot NP in Tagalog is normally definite—it is an NP whose reference is presupposed. Thus different *voices* cause contrasts in presupposed reference such as the following' (Manning 1996:84, emphasis mine).

[8] 'In addition to a wide range of forms that are clearly derivational, there are typically three sets of formal distinctions that affect almost every verb and are problematic with respect to whether they are inflectional or derivational: those marking **voice**[8] (sometimes called focus), mode (sometimes called mood), and aspect' (Reid 1992:65, emphasis mine).

Reid's footnote 9 indicated that he was more concerned in that paper with the historical development of these forms than with their syntactic function, and that the terminology that he was using was a convenient set of labels. In fact the thrust of the paper was to show that the forms were derivational rather than inflectional.

[9] 'Thus, morphologically related verb forms or, more specifically, the various complexes formed by affixing different 'voice' markers to a given stem, will assign their theta roles in an identical fashion' (Guilfoyle et al., 1992).

'The term focus here refers to the notion of grammatical *voice* rather than the notion of emphasis or contrast' (Chang 1996:81, 1997).

[10] 'The facts in question concern the marking of grammatical relations between verb and topic by affixes in the verb. These markers have been referred to as voice indicators (active and passive with at least three different passives by Bloomfield 1917, 1933, Blake 1925, and Lopez 1937; four voices by McKaughan 1957, 1962)...' (McKaughan 1970).

languages is not obviously of the same type, and different voice analyses based on semantic rather than grammatical criteria may be difficult to reconcile. I will cite voice definitions of the standard four foci by Søren Egerod[11] and Lillian Huang[12] to illustrate this point.

[m..

Egerod

Active voice: indicates that the construction contains an implicit or explicit reference to a person, animal, or thing which possesses the characteristic or performs the action expressed by the verb. If the reference is to a pronoun, this is in the nominative case. The active construction contains no genitive pronoun, nor noun construction with *naʔ*. (Egerod 1965:270)

(2) (Egerod 1965:273; my format)
  ciux mquas squliq qasa
      sing person that
  'That person is singing.'
(3) (Egerod 1965:273; my format)
  niux sakuʔ maŋaʔ mamiʔ laqiʔ
      I feed rice child
  'I am feeding the child rice.'

Huang

ACTIVE VOICE: 'the portion of the EVENT-PARTICIPANT complex magnified by VOICE is the activity itself.' (Huang 1993b:19) 'The selection of the ACTIVE emphasizes the performance of the EVENT in its origin and without regard to its outcome…' (Huang 1993b:20) 'The ACTIVE takes the fact of performance as the portion of the EVENT which is highlighted in the EVENT-PARTICIPANT relation.' (Huang 1993b:24)

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[11] Egerod does not give a definition of focus or voice in general, but uses the terms ACTIVE and PASSIVE to refer to the four basic forms.

[12] For Huang, 'voice' means a classification of verbs with particular affixes into classes marked by any of the usual four 'focus' affixes: *s*- CIRCUMSTANTIAL VOICE (p.1), *-un* CULMINATIVE (VOICE) (p.9), *-an* TRANSVERSAL VOICE (p.9), and *m*- ACTIVE VOICE (p.18). She does note that voice is independent of ROLE (p.9).

..un]

Egerod

Indefinite passive: indicates that the construction contains an implicit or explicit reference to an object (animate or inanimate) which is affected by the event or action expressed by the verb. No definite reference to anything which forms part of the speaker's situation at the time of speaking is implied. If a pronoun is the affected object it is in the nominative case. If it expresses the agent it is in the genitive. If a noun expresses the agent it takes the preposed particle *naʔ*. (Egerod 1965:270)

(4) (Egerod 1965:276; my format)
   suaʔun   suʔ   ziau   suʔ
   how handle   you   problem   your
   'How will you handle your problem?'

Huang

CULMINITATIVE VOICE: focuses upon the outcome as the relevant semantics of the EVENT-PARTICIPANT relationship. (Huang 1993b:24) It is closely associated with the thing/object involved in that activity. (Huang 1993b:13)

..an]

Egerod

Definite Passive: indicates that the construction contains an implicit or explicit reference to an object which is affected by the event or action. It further implies a definite specific reference to a known place, time or circumstance which enters into or circumscribes the action or event. Pronouns and nouns have the same form or particle as with the indefinite passive. (Egerod 1965:271)

(5) (Egerod 1965:277; my format)
   niux makuʔ rŋan   mamiʔ laqiʔ
       I   feed   rice   child
   'Yes, I am feeding the child rice.'
(6) (Egerod 1965:277; my format)
   suaʔan   suʔ   ziau   suʔ
   how handle   you   problem   your
   'How did you handle your problem?'

Huang

TRANSVERSAL VOICE: takes the implementation-aspect as the semantics which it underscores in the EVENT-PARTICIPANT relation. (Huang 1993b:24) 'When the salient portion of the EVENT-PARTICIPANT complex is the TRANSVERSAL segment, it is the patient and the circumstance of its discovery which 'stands out', i.e., 'on purpose…' (Huang 1993b:19)

[s..

Egerod

Relational passive: indicates an implicit or explicit reference to a means by which, or a reason on account of which, the action is undertaken. If a pronoun expresses the agent it is in the genitive. If it expresses the object affected by the action it is in the oblique case in -*an*.)' (Egerod 1965:271)

(7) (Egerod 1965:280; my format and interlinear gloss)
ual   nhaʔ   sʔagal   pagai   piatuʔ
past by them   use for scooping up   rice   bowl
'They used a bowl for scooping up the rice.'

Huang

CIRCUMSTANTIAL VOICE *s-*: focuses upon the PERIPHERAL semantic relation which some PARTICIPANT bears to the EVENT. (Huang 1993b:09)

(8) (Huang 1993b:3, (6)a; my format and interlinear gloss)
sʔagan   mu   qulih   sqariʔ   qani
take with   by me   fish   net   this
'I used this net to catch the fish'
(9) (Huang 1993b:3, (7)a; my format and interlinear gloss)
nanuʔ   spaqut   :suʔ   sayun   tali
what   ask about   by you   Sayun   Tali
'What did you ask Sayun about Tali's affairs?'
*'What did you ask Tali about Sayun's affairs?'

I personally find these semantic characterizations hard to comprehend and match with the data. Because such a semantic approach is unconstrained, it also lends itself to error. Thus Atayalic (Seediq and Atayal) have innovated an ..*an*] verb form which functions

as the non-future of 'Goal Focus' ..*un*]):

> 'Thus a more functional description of the Seediq verb system would contain the two following 'tense' forms: PF PRES [..*un*]] would be a simple future passive (18a), LF PRET [..*an*]] would be a preterite passive (b).' (Holmer 1996:40; [] my insertions).

(10) ..un], (Seediq: Holmer 1996:40, (18)a; my format and interlinear gloss)

Mahun mu ka sino.
drink PF 1s.g. KA wine
'I shall drink the wine.'

(11) ..an], (Holmer 1996:40, (18)b)

Nmahan mu ka sino
drink LF PRET 1s.g. KA wine
'I drank the wine.'

(12) ..un], (Huang 1993a:37, (61)e)

nanuʔ ptzywagun mlikuy
what work man
+gfct
−past
'What is it the man will want to do?'
[Nanren yao zuo de shi shenme?]

(13) ..an], (Wulai Atayal: Huang 1993a:37, (61)d; my format and interlinear gloss)

nanuʔ ptzywagan[13] mlikuy
what work man
+gfct
+past
'What is it the man did?'
[Nanren zuo de shi shenme?]

Because the innovative Goal Focus past tense is homophonous with the 'Locative Focus' ..*an*], (also compare (4) with (6)), both Egerod and Huang group these two sets of forms together and try to find a semantic definition that covers both. This is presumably one of the reasons for the obscurity of their characterizations of verb forms ending in ..*an*].

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[13] Huang notes in a footnote that her consultant prefers a form *pincwagan* with the perfective infix [..in.. to this form, suggesting perhaps a change in progress.

3.2 Focus as subject-verb <u>agreement</u>:

The other position, formulated more recently than the voice analysis but not clearly in contrast with it, is the idea that Austronesian focus is a kind of subject-verb agreement. This position has been assumed by Ceña,[14] Huang,[15] Wu,[16] and De Guzman.[17] Schachter and Otanes' definition,[18] while very vague, probably belongs here too, as does the approach taken in some Chomskyan analyses.[19]

Focus as case relation agreement between the 'Absolutive' constituent and the verb in Tagalog (adapted from De Guzman 1997:304-305; seamless notation; the underlined string marks agreement with the NP marked with bold type. Case relations added by SS.)

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[14] 'The ***Verb and its Subject*** must also ***agree*** in their Thematic Role' (Ceña 1993:43, emphasis mine).

[15] 'Bound ***Nominative pronouns*** in both dialects serve as grammatical subject, showing ***agreement*** with the ***verbal affixes***' (Huang 1994b; MS:5, emphasis mine).

'The term 'focus system' used here refers to a kind of **agreement** system between the **subject** (i.e., the focused noun phrase) and the **verb**, though showing no person, gender or number agreement between them' (Huang 2001, emphasis mine).

She does not state what category the verb <u>does</u> agree with.

'Very often the locative focus affix *-an* is used to show the ***agreement*** between the ***verb*** and the ***focused noun*** (***phrase***) which manifests what is traditionally regarded as a patient argument' (Huang 1995, emphasis mine).

[16] 'Syntactically speaking, the word *mi-nanum-an* seems to exhibit verbal as well as nominal properties as it behaves like an ordinary verb showing ***agreement*** with a ***nominative*** noun manifesting a patient participant in (4.8a'), whereas in (4.13a) the word *mi-nanum-an* is preceded by the nominative case marker *ku*...' (Wu 1995:103, emphasis mine).

[17] '...the **agreement** between the voice forms of the verb *hiram* 'to borrow' and the case relations of the grammatical subject' (De Guzman 1997:304, emphasis mine).

[18] '...FOCUS is the feature of a verbal predicate that determines the semantic **relationship** between a **predicate verb** and its **topic**' (Schachter and Otanes 1972:69, emphasis mine).

[19] 'Since morphological case-marking and ***verb agreement*** constitute the most general devices for ***marking*** grammatical functions, ...the focused noun phrase has been traditionally assumed to be the ***subject*** of the sentence' (Byma 1986:2, emphasis mine).

'Focus implies here morphology on the ***verb*** which specifies the semantic role of a nominal phrase—object focus specifies the semantic role of the object of the verb, and subject focus specifies the semantic role of the ***subject***' (Holmer 1996:16-17, emphasis mine).

'The Philippine system of verbal focus is characterized by the use of a series of ***verbal affixes*** to ***indicate*** the ***thematic role*** of the ***argument bearing the absolutive marker***' (O'Grady 1997:125, emphasis mine).

(14) hiram<u>in</u>; the ..in] (Ø in the perfect) marks agreement for Object

h<u>in</u>iram   nang   babai   **ang**   **libro**   sa   aklatan   para   sa

comp-borrow   *Erg*   *woman*   *Abs*   *book*   *Obl*   *library*   *for*   *Obl*

OV   *Object*

bata   nang   kaniya   =ng   ID.

child   *Obl*   *her*   *–lkr*   *ID*

'The woman borrowed the book from the library for the child with her ID card.'

(15) h<u>um</u>iram; the [..um..] marks agreement for Agent

h<u>um</u>iram   **ang**   **babai**   nang   libro   sa   aklatan

comp-borrow   *Abs*   *woman*   *Obl*   *book*   *Obl*   *library*

AV   *Agent*

(16) hiram<u>an</u>; the ..an] marks agreement for Locative

hiniram<u>an</u>   nang   babai   nang   libro   **ang**   **aklatan**

comp-borrow   *Erg*   *woman*   *Obl*   *book*   *Abs*   *library*

LV   *Locative*

(17) <u>i</u>hiram; the [i.. marks agreement for Benefactive

<u>i</u>nihiram   nang   babai   **ang**   **anak**   nang   libro   sa   aklatan

comp-borrow   *Erg*   *woman*   *Abs*   *child*   *Obl*   *book*   *Obl*   *library*

BV   *Benefactive*

(18) <u>ipang</u>hiram; the [ipang.. marks agreement for Instrumental

<u>i</u>p<u>inang</u>hiram   nang   babai   nang   libro   **ang**   **kaniya**   **=ng**

comp-borrow   *Erg*   *woman*   *Obl*   *book*   *Abs*   *her*   *–lkr*

IV   *Instrument*

ID   sa   aklatan

ID card   *Obl*   *library*

Note that a similar set of examples with ..*hiram*.. 'borrow' shows up again and again in the literature because it is a rare bird: it has a related word in all the main foci, and so contributes to the impression that we are dealing with conventional inflectional agreement.

3.3 Voice as inflection

Part of my proof that focus is derivation is to show that if focus is voice, it must be inflection, because voice is a kind of inflection. My on-line *American Heritage Dictionary* defines voice as

"Grammar. A property of verbs or a set of *verb inflections* indicating the relation between the subject and the action expressed by the verb:…" (emphasis mine)

American structuralism also counts it as inflection:

'Two of the *inflectional* categories of Latin verbs are *voice* and aspect.' (Hockett 1958:212; emphasis mine)
'**Voice**. Voice-distinctions apply to verbs and have to do with the *relationship between the subject and the verb*, the verb and its object, or the verb and some other noun tied to it in an intimate way…. Semantically similar distinctions are often made syntactically instead of *inflectionally*.' (Hockett 1958:236; emphasis mine)

Richard Hudson is one prominent modern theoretician who accepts voice as inflection, if somewhat tentatively:

'One tricky question is how passivization fits into the contrast between inflectional and derivational morphology. At present I treat it as an *inflectional* feature (*voice*), but this may be wrong.' (Hudson 1997; emphasis mine)

Lawrence Reid lists several reasons from which it could be concluded that Austronesian focus is not only voice but also inflection:

'The *voice* system on the other hand has been treated by some as *inflectional* (De Guzman 1978, 1991) and by others as derivational (Bender 1988, Starosta 1986, 1988). The system seems to be inflectional in that all verbs typically carry one of the voice affixes, whose form and meaning is generally predictable based on the semantic features of the verb root, and whose occurrence can be linked to syntactic features in the case frame of the verb.' (Reid 1992:67; emphasis mine)

Note however that the phrase '… voice affixes, whose … meaning is generally predictable based on the semantic features of the verb root' does not derive from any recognized conventional feature of inflection. For example, English past tense is past tense regardless of the semantic properties of the verb 'root' it attaches to. Regarding the second point, it would be nice if we could predict the occurrence of an inflectional

pattern from the verb class, but in fact, except for transitivity differences, that is not something found in other inflecting languages. When the inflections do not match the syntactic patterns, as they often do not, the 'syntactic classes' end up being defined circularly by the range of verbal 'inflections' they display.

3.4 Focus as <u>voice</u> (inflection) <u>and</u> subject-verb <u>agreement</u> (inflection)

Other Austronesianists have typically not taken a clear position on this question, though some have. Lawrence Reid summarizes this dual view that 'focus' is both voice and subject-verb agreement.

> 'Numerous descriptions of the verbal morphology of Philippine languages exist in the literature, frequently drawing attention to the considerable complexity of these systems… [T]here are typically three sets of affixes which affect the form of almost every verb, which are problematic with respect to whether they are *inflectional* or derivational. One set are the *voice* (sometimes called *focus*) affixes…. The voice affixes are so-called because they have typically been analyzed as *signaling* the case relation of the *subject*.' (Reid 1992:65; emphasis mine)

3.5 Agreement as inflection

In contrast, there seems to be no disagreement in general linguistics outside the Austronesian field about regarding subject-verb agreement as inflectional. This view characterizes the positions of Barry Blake,[20] Randall Hendrick,[21] and Richard Hudson.[22] It also seems to be the received Chomskyan assumption.[23] I conclude that if focus is

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[20] 'In Italian, which is more representative of Romance [than French], there are no subject clitics, the *subject* being represented *inflectionally* in the *verb*' (Blake 1994:181, emphasis mine).

[21] 'Like Baker, Sadock also wants to provide a uniform account for noun incorporation and cliticization. He gives structures like (72) where on the syntactic level *nassata-qua-punga* is a verb but on the morphological level it is composed of a *noun*, *verb*, and tense-*agreement inflection*' (Hendrick 1995:333, emphasis mine).

[22] 'The two kinds of morphology both have very similar effects on word-shapes; e.g., the *-s on cats* is due to *inflectional* morphology, while that on <u>linguistics</u> is due to derivational morphology' (Hudson 1997, emphasis mine).

[23] 'The lexical items in the working area are completely formed words, fully *inflected* for case, *agreement*, tense, etc.' (Chomsky 1995:360, emphasis mine).
'Matthews (1974) suggests that the choice between treatments of *inflection* as morphemes

agreement, it is also inflection.

3.6 Focus as agreement and inflection

Some investigators explicitly conclude that Austronesian focus is inflection as well as agreement. This comes out in the work of Philippinists such as Curtis McFarland[24] and Resty Ceña,[25] as well as in Chomskyan analyses.[26]

3.7 Focus as inflection

More commonly, the inflectional status of focus is simply assumed without justification. This is true of much work by Philippinists such as McKaughan (McKaughan 1958), Wolff (Wolff 1973), McFarland (McFarland 1976),[27] Ramos and

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or as features on words is a matter of taste… S. Anderson (1986, 1992), for example, is led to introduce an element of hierarchy into the verbal agreement features of Georgian to distinguish the features relevant to object agreement from those determining ***subject agreement***' (Hendrick 1995:303, emphasis mine).

'… [A]uxiliaries are [+***V***] (and hence carry verbal tense/***agreement inflections***)… (Radford 1997:67, emphasis mine).

'The distinction made by the patients was especially important in light of recent developments in linguistic theory: according to the split ***inflection*** hypothesis (Pollock 1989) there are structural differences between tense and ***agreement***, each forming a distinct functional category' (Grodzinsky 1999, emphasis mine).

'The first piece of evidence for this claim came from a Hebrew speaking patient… who was selectively impaired in the production of ***inflectional*** features: she had problems with tense, but not ***agreement***' (Grodzinsky 1999, emphasis mine).

[24] 'Two or more verbs are considered to be members of a ***focus inflection*** if they differ with regard to focus, "the feature of a verbal predicate that determines the semantic ***relationship*** between a predicate ***verb*** and its ***topic***"...' (McFarland 1976:15, emphasis mine).

[25] 'Now let's look at Role ***Inflection*** in the ***Verb***… Notice that the Verbs carry the Agent Role inflection -um-, which normally ***indicates*** that the ***Subject*** is instigator rather than affected' (Ceña 1993:58, emphasis mine).

'***Verbs inflect*** to show the Role of the ***Subject*** NP' (Ceña 1993:61, emphasis mine).

[26] 'Contrary to [Guilfoyle, Hung, and Travis] (1992), Mei (1994) treats the ***focus*** affixes uniformly as an ***inflectional*** category. He argues that focus in Austronesian languages refers to a Spec-head ***agreement*** relation between the ***subject*** argument and the ***Infl***, termed as T-agreement'; [T = theta] (Chang Yung-li 1996:83-84, emphasis mine).

[27] 'Many verbs are also members of ***focus***...***inflections***' (McFarland 1976:12).

'We thus conclude that *magbigay*, *ibigay*, and *bigyan* are members of a ***focus inflection***' (McFarland 1976:16).

Bautista (Ramos and Bautista 1986),[28] Ceña (Ceña 1993),[29] and De Guzman (De Guzman 1997). This also characterizes some work by Formosanists such as Huang (Huang 1993b)[30] and Dah-An Ho (Ho 1990).[31] Holmer's[32] work in a Chomskyan framework (Holmer 1996) also fits in here, and at one point he suggests that focus is both inflectional and derivation,[33] a position that is apparently not excluded by the powerful Chomskyan framework in which he works:

> 'LF FUT is always ***nominal in meaning***, but this should not have any effect on its position in the ***verbal paradigm***, since LF PRES is almost always nominal or semi-nominal in meaning as well.' (Holmer 1996:42-43; emphasis mine)

3.8 Summary to this point of the arguments pro

Several logical inferences underlie at least some of the positions taken in the above paragraphs and citations.

1) Focus is inflection because it is voice, or because it is agreement.

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[28] 'Verbs, unlike the other parts of speech mentioned here, can be **inflected** for aspect, kind of action, and **focus**' (Ramos 1971b:xix; cf. Ramos and Bautista 1986, emphasis mine).

[29] 'Notice that the Verbs carry the Agent Role ***inflection*** -um-, which normally indicates that the ***Subject*** is instigator rather than affected' (Ceña 1993:62).
'Verbs ***inflect*** to show the Role of the ***Subject*** NP' (Ceña 1993:61).

[30] 'Second, the resulting stem *sra9i* may appear in the other ***VOICES*** … but not the CIRCUMSTANTIAL … This possibility appears with other roots, and ***as happens in derivation***, it may be accompanied by semantic specialization; that is, the root without *s* and the derived stem with *s* may begin to diverge semantically …' (Huang 1993b).
  Here, in contrast to her earlier remark, I take the phrase 'as happens in derivation' to mean that Huang considers voice to be not derivation but inflection.

[31] 'PF verbs imply that their P's are nominative. In Yami, all nominative NP's must be definite, and PF verbs should take bare verb roots as their verb stems. PF verbs can be divided into two sets; the verbs of the first set are composed of their stems plus the inflectional PF suffix -*an*, and those of the second, plus the suffix -*en* or Ø' (Ho 1990).

[32] 'Verbal ***inflection*** in Seediq comprises mood, tense and ***focus***' (Holmer 1996:35).
'… certain verb forms are being singled out for use as true verbs, but being ***conjugated*** in something similar to aspect rather than ***focus***' (Holmer 1996:38).
  The term 'conjugation' applies to verbal inflection.

[33] 'LF FUT is always nominal in meaning ... but this should not have any effect on its position in the verbal paradigm, since LF PRES is almost always nominal or semi-nominal in meaning as well' (Holmer 1996:42-43).

2) Focus is inflection because it is productive.[34]

3) Focus is inflection because it forms paradigms.[35]

3.9 De Guzman's analysis

Videa De Guzman (De Guzman 1997) has continued to maintain the position that 'focus' is inflectional. She regards the difference between inflection and derivation as scalar, and adds up the points to show that focus scores higher for inflection than for derivation on this scale:

> 'Finally, recognizing the elusiveness of a clear and absolute boundary between inflection and derivation, I will show that the voice affixes exhibit more of the prototypical features attributed to inflection than of those attributed to derivation.' (De Guzman 1997:303)

In this demonstration, she uses the same criteria that other scholars use, but the conclusions she reaches do not seem to me to be consistent with the data they are based on. Here is a condensed summary:

Inflection forms paradigms; derivation forms word families (De Guzman 1997:318, 5.1)

One defining property of paradigms is that their members all belong to the same syntactic class. However, De Guzman notes that focus can change transitivity:

> 'In sentence (2), initial 1 (the Agt) has advanced to 2 creating an antipassive (intransitive) clause.' (De Guzman 1997:304)

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[34]   'Verbs inflect to show the Role of the Subject NP' (Ceña 1993:61).
       '*Any* nuclear role may become PrP' (Harvey 1979:43).

[35]   'There are *four focus types*, Actor Focus, Patient Focus, Locative Focus, and Instrumental Focus' (Harvey 1979:43).
       'These four focuses *may occur in the perfective* when they are marked by *-in-' (Harvey 1979:43).
       'The *paradigm* as such reflects the actual forms and their historical identity' (Holmer 1996:43).
       'In addition to a wide range of forms that are clearly derivational, there are typically three sets of formal distinctions that affect almost every verb and are problematic with respect to whether they are inflectional or derivational: those marking voice (sometimes called focus), mode (sometimes called mood), and aspect' (Reid 1992:65).

Transitive and intransitive verbs are of course two different syntactic classes, so focus cannot be inflection because focus paradigms include words from different syntactic classes.

Inflection is generally more productive than derivation (De Guzman 1997:320, 5.2)

If focus were inflection, then every verb should have a form for every slot in the paradigm, with only very rare exceptions, but in fact the opposite is true in Tagalog: it is very rare to find a verb that has forms for all the focus slots. De Guzman has a solution for this: a verb that has only two foci, say, AF and LF, belongs to a separate semantic class, and every verb in that semantic class has the same two inflected forms, *ergo* inflection is completely productive. How can we tell that a given verb belongs to this semantic class? Because it has exactly those two 'inflected' forms. So, the argument is circular. Note that we do not find such semantic conditioning in exemplary verb-inflecting languages such as Latin or Yup'ik Eskimo.

Inflection applies obligatorily; derivation, optionally and sporadically (De Guzman 1997:321, 5.3)

I was not able to follow the reasoning for this point.

Inflection does not change word class; derivation can; the corollary to this is that inflection is relevant to syntax. (De Guzman 1997:321, 5.3)

In this section we find that for De Guzman (p.321), *Verb* is a semantic rather than a syntactic class, so the syntactic behavior of these words is of no interest. In modern linguistics, however, parts of speech are defined distributionally, not notionally, and looked at from this point of view, the case against an inflectional analysis is especially strong. In fact, De Guzman herself gives some nice evidence that 'focus' morphology changes basic syntactic class:

> 'The benefactive form takes on the stem form of the corresponding AV, whereas the instrumental form utilizes a stem made up of the derivational affix pang- 'for use in —' and the basic verb stem.' (De Guzman 1997:306)

What has happened here is that [*paŋ..* derives a noun meaning 'thing for use in Ving' from a verb V, and then another Word Formation Strategy (derivation rule) derives an [*i..*-marked instrumental verb from the [*paŋ..* noun. So, BF [*i..* morphology derives

verbs from nouns. Going one step farther, the ubiquitous Tagalog [*mag*.. verbs are of exactly the same type: [*pag*.. gerunds are derived from verbs, and then the derivation of [*mag*.. verbs from gerund [*pag*.. nouns is marked by the intransitive 'actor focus' [*m*.. Again, a focus affix, this time AF *m-*, has derived a verb from a noun. Neither [*i*.. nor [*m*.. can then be inflectional.

Inflectional affixes are unique to a particular syntactic class of words; derivational affixes become an inseparable part of the new lexical representation. (De Guzman 1997:322, 5.5)

In this section De Guzman gives us further evidence against her own analysis:

'Likewise, there is something curious about the appearance of the affix *i-* in derived abilitative/involuntary/accidental (A/I/A) forms inside the derivational affix *ma-*. For example, *ma-itapon* 'able to throw s.t., *ma-ihiram* 'able to borrow for someone', *ma-ipanglutuʔ* 'able to use to cook with', etc.' (De Guzman 1997:322)

Yes, but it is only 'curious' under an inflectional analysis of [*i*.. . Under a derivational analysis, both [*i*.. and [*ma*.. mark derivation, so there is no theoretical constraint on their relative order. Instead, the sequence of derivational morphemes just tends to reflect the order in which the words joined their new derivational word family.

The author's last comment in this section is that focus affixes exclude each other. In fact that is not true of all Philippine or Formosan languages, but it is generally true because different foci signal different and incompatible meanings, and a word cannot have two conflicting meanings.

4. The alternative analysis

An important part of the proof that Formosan and Philippine 'focus' morphology is derivational depends on the status of transitivity in these languages. In brief, if 'AF' forms are grammatically intransitive and 'NAF' forms are grammatically transitive, then 'focus' relates verbs in different syntactic classes. It thus cannot be inflectional, and can only be derivational. It thus becomes necessary to spend some time clarifying the concept of 'transitive'. Although the conception of transitivity that I propose here is not new, it is also not the one commonly used in Formosan linguistics, and the differences need to be brought out, along with their consequences.

4.1 Transitivity

It is important to distinguish carefully between notional school definitions of transitivity ('Expressing an action that is carried from the subject to the object; requiring a direct object to complete meaning.'[36]) and linguistic ones. By the old notional definition, any expression that encodes an action with one participant acting on another is transitive. In the linguistic literature, many linguists do not go any farther than this in defining transitivity (Dixon 1994:2, 8, 124, 129), but it is both possible and necessary to be much more precise. Looking more broadly and deeply, we find transitivity to be a much more precise concept, with mutually reinforcing morphological, syntactic, and semantic dimensions. A single action may be encoded transitively ('Renfrew ate dinner at seven') or intransitively ('Renfrew dined at seven'), and a sentence with two arguments may be transitive (*Hansdieter befährt diese Strasse jeden Tag* [German] 'Hansdieter drives this road every day') or intransitive (*Hansdieter fährt jeden Tag auf dieser Strasse* 'Hansdieter drives on this road every day'; cf. Dixon and Aikhenvald 2000:3). An analysis of the latter two German examples as intransitive or transitive is not a matter of referring to the external situations they encode, but of identifying the grammatical generalizations they participate in.

In the lexicase view, every verb takes a PAT (Patient) complement, and every transitive verb takes an additional AGT (Agent) complement. Either type of verb may take one or more additional complements. Thus an intransitive verb may take two or more arguments and still be intransitive (21):

(19) Renfrew   dined at seven
     PAT   −trns
(20) Renfrew   ate   dinner at seven
     AGT   +trns   PAT
(21) Hansdieter   fährt auf   dieser Strasse jeden Tag
     AGT   −trns LOC
     'Hansdieter drives on this road every day'
(22) Hansdieter   befährt diese Strasse jeden Tag
     AGT   +trns   PAT
     'Hansdieter drives this road every day'

It may be noted from the above examples that unlike conventional theta-role systems,

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lexicase case relations encode perceptions of situations rather than the situations themselves. Thus a single external participant (e.g., the street) may be encoded in different ways in different encodings of the same situation (e.g., as LOC in (21) and as PAT in (22)). This example also illustrates the fact that languages frequently have two different ways of encoding two-argument propositions. In this situation, one of the two alternative encodings shares more linguistic properties with one-argument verbs than the other, and this one should be analyzed accordingly as grammatically intransitive. The other counts as canonically transitive, and that is the one that is used in determining ergativity. If the wrong one is chosen, the determination of ergativity comes out wrong too.

Work by Gibson and Starosta (1990), Starosta (1988, 1998), Ho (1993), and Liao (ms., 2002) illustrates how morphological, syntactic, and semantic evidence can be brought to bear in making the necessary determination. Austronesian examples are used to illustrate the distinctions:

4.1.1 Morphological criteria: Tsou

mcoi 'die'
(23) (Extracted from Tung 1964:248-251)

moh　　cu　　mcoi
past　　then　　die
'He died.'

mimo 'drink'
(24) (Extracted from Tung 1964:252-253)

io　　　la　　　uh to nsóo　　　　　ho　　mímo
that which habitually　go to deer's drinking place and　drink
zóu　　cʔo　　úa
really　only　deer
'That which comes to deer's-drinking-place and drinks is surely only deer.'

ima 'drink it'
(25) (Szakos 1998 MS; C7012139)

iʔo　　　te ʔo ima ci　　kopu te mu　　peelɨ　　ima
that which will I　drink which is cup　will by you be able　drink it
'Will you be able to drink the cup that I am about to drink?'

Tsou, like other Formosan languages, has two distinct grammatical patterns for encoding two-participant actions. Also as in the other Formosan languages, one-

argument verbs in Tsou frequently have an initial [*m*.., and one of the two-argument patterns also contains many members with initial [*m*.. or an [..*m*.. infix. The other set of two-argument constructions ends in ..*a*]. ..*i*], or ..(*n*)*eni*], endings which never appear on one-argument verbs. Conclusion: the former class are morphologically intransitive, the latter class morphologically transitive.

4.1.2 Syntactic criteria: Paiwan

(26) [P201036][37]

mipuruk	akən	
jump	*I*	Nom 'Nominative'
–trns	Nom	trns 'transitive'

'I jump.'

(27) [P201051]

dumukur	timadu	ta	nusun	
hit	*he*	*at*	*you*	
–trns	Nom	Lcv		Lcv 'locative'

'He hit you.'

(28) [P201044]

dumukur	akən	ta	imadu	
hit	*I*	*at*	*him*	
–trns	Nom	Lcv		Abl 'ablative'

'I hit him.' (past)

(29) [P201048]

su	dinukur	timadu	
by you	*hit*	*he*	
Gen	+trns	Nom	Gen 'genitive'

'You hit him (past).'

(30) [P201055]

ku	dukurin	su
by me	*+trns*	*you*
Gen		Nom

'I hit you.'

In Paiwan, intransitive verbs, including two-argument intransitives, take all clitic pronouns after the verb (26)-(28), but in grammatically transitive clauses, the Genitive pronoun precedes the verb (29)-(30). Note that the morphology is consistent with the

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[37] Unmarked P2 numbers from SS's field notes.

syntax: intransitives take an [*m..* prefix or an [..*um..* infix, while grammatical transitives take an [..*in..* infix or an ..*in*] suffix.

4.1.3 Semantic criteria:

4.1.3.1 Acehnese

In Acehnese (Western Austronesian; northwest Sumatra), grammatical transitivity is marked rather like it is in Paiwan: Gen AGT clitic pronouns (where : indicates the bound side of a clitic) precede the verb and Nom PAT pronouns follow the verb. For grammatically intransitive verbs, the clitic pronoun follows the verb. Acehnese has been called an 'active' language, distinguishing A and O subtypes of intransitive verbs, but in the lexicase analysis, single-argument A verbs are impersonal transitives (Starosta 1998).

As in the languages of exemplification above, Acehnese has pairs of sentences which differ in grammatical transitivity and which differ in a regular semantic way as well. According to Paul Hopper and Sandra Thompson (Hopper and Thompson 1980), clauses can be distinguished according to the degree of semantic transitivity they encode, where the measure has to do with how directly and how much the 'direct object' is affected. In Acehnese, this distinction correlates exactly with the grammatical transitivity distinction. Conclusion: in such pairs, the semantically less transitive member is grammatically intransitive.

(31) Canonical intransitive [Durie 1987:369; H201006]

Gopnyan	rhét	:geuh		
he/she	*fall(i)*	*he/she*		
Tpc	–trns	Nom		Tpc 'topic'

'(S)he falls.'

(32) Canonical transitive [Asyik 1982:26; H101101]

Ka	lōnː	yue	jih	peugot	pintō	nyoe.
(perf)	*I*	*ask(t)*	*he/she/it*	*repair(a)*	*door*	*this*
	Gen	+trns	Nom		Obl	Obl 'oblique'

'I've asked him to repair this door.'

(33) [Asyik 1982:16; H101042]

Bèk	galak	:keuh	nyan
don't	*like(i)*	*you*	*that(PR)*
	–trns	Nom	Obl

'Please don't like that.' (weak)

(34) [Asyik 1982:16; H101043]

Bèk   ka: galak   nyan
don't   *you*   *like(t)*   *that(PR)*   _
          Gen   +trns   Nom
'Don't (make an effort to) like that.' (stronger)

(35) [Asyik 1982:16-17; H101045]

Hana banci   :lōn   keu   mie   nyan
not *hate(i)* *I*   *at* *cat* *that*
       −trns   Nom   Obl
'I don't hate the cat.' [neutral statement]

(36) [Asyik 1982:16; H101044]

Hana lōn: banci   keu   mie nyan
not   *I*   *hate(tm)* *at*   *cat*
        Gen   +trns   Nom Obl
'I don't (make an effort to) hate the cat.' [denying accusation]

4.1.3.2 Sāmoan

Sāmoan (Polynesian) is another Austronesian language where semantic transitivity matches grammatical transitivity:

(37) [SS notes; SM201014b']

'ua   kiki   le   teine   i[38]   le   tama
has   *kick* *the* *girl*   *at*   *the* *boy*
        −trns   Nom   Lcv
'The girl is kicking (something) to the boy'

(38) [SS notes; SM201014b"]

'ua   kiki   le   teine   i   le   tama
has   *kick* *the* *girl*   *at*   *the* *boy*
        −trns   Nom   Lcv
'The girl is kicking at the boy'

(39) [SS notes; SM201014a']

'ua   kiki   e   le   teine   le   tama
has   *kick* *by* *the*   *girl*   *the* *boy*
        +trns Erg   Nom
'The girl kicked the boy (made contact).'

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[38] I may have mistranscribed ʔi as i here.

4.1.3.3 Tsou

Frequently the difference in semantic transitivity is manifested as a difference in the definiteness of the notional object. This is often the case in Tsou.

(40) Canonical intransitive [SS notes; C501019]

mi   ʔo   sʉʔno
I   *get angry*
−trns Nom −trns
'I got angry.'

(41) [39] mi   ta   káybʉ ta   fkói
          he   *like* *of*   *snake*
      −trns Nom −trns   Nom
    'He (visible) liked a snake.'

(42) i   si   káyba e   fátu
       of him *like*   *stone*
    +trns Gen   +trns   Nom
    'He (invisible to speaker) liked the stone.'

(43) mio   máyo ta maméwi   e   móʔo
        catch *of* *old man*   *Moe*
    −trns   −trns   Gen   Nom
    'Moe caught an old man.'

(44) i   ta   yáa ta   móʔo e   maméwi
       of him *catch* *of*   *Moe*   *old man*
    +trns Gen   +trns   Gen   Nom
    'Moe caught the old man.'

(45) [C501045]

mio yobáko ta   fkói   e   maméwi
     kill   *of* *snake*   *old man*
−trns −trns   Gen   Nom
'The old man killed a snake.'

(46) i   si   yobáka ta maméwi e   moʔo
       of him *hit*   *of* *old man*   *Moe*
    +trns Gen   +trns   Gen   Nom
   'A/the old man hit Moe.'

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[39] Examples (41)-(46) constructed by SS.

In the Tsou examples, we can see morphological transitivity ([*m..* verbal morphology vs. *..a*] morphology) matching syntactic transitivity (Nom vs. Gen clitic pronouns) matching semantic transitivity (indefinite vs. definite notional objects). Any analysis which regarded the first members of each of the two argument patterns in this section as transitive would lose all these generalizations in one language after another. Moral: one swallow does not make a summer, and two arguments do not make a transitive.

Since the focus forms of a single root include words from two different syntactic classes, transitive verbs and intransitive verbs, the relation between them cannot be inflection.

4.2 Transitivity and ergativity

For the purposes of this paper, the most important question in which transitivity is involved is the question of ergativity. Identifying an ergative construction or language requires comparing transitive and intransitive clauses. In the classic formulation, a language (or construction) is accusative if the 'subject' of a transitive verb ('A') is marked like the single argument of an intransitive verb ('S'), and ergative if it is the 'object' of a transitive verb ('O') that is encoded like the single argument of an intransitive ('S'):

(47)   Ergative languages   Accusative languages
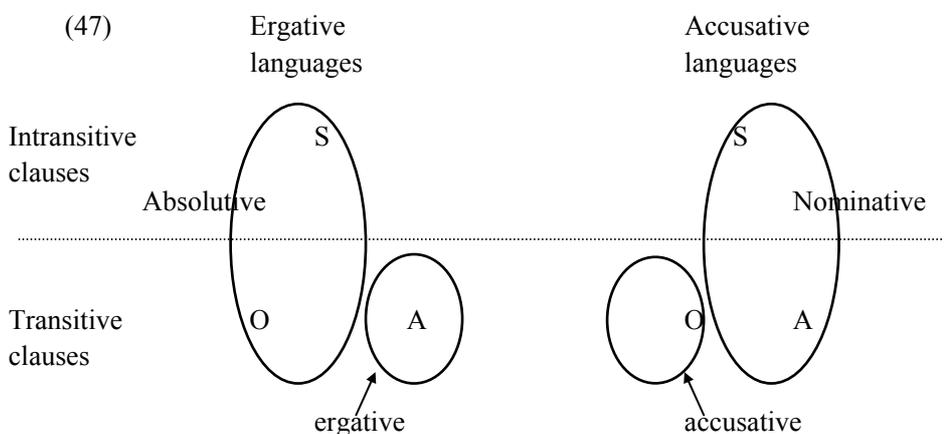
Most (but not all) Taiwan syntacticians working on Formosan languages have recognized the fundamental distinction drawn by Shigeru Tsuchida (Tsuchida 1976) between AF and non-AF ('NAF') verbs. With a couple of shining exceptions, though (Ho 1993, Huang 1994a, and apparently Rau 2000:7-8), linguists in Taiwan have failed to recognize that this distinction is one of grammatical transitivity: NAF verbs are

grammatically transitive and AF verbs are grammatically intransitive. When NAF verbs are then compared with single-argument intransitives, 'S' is found to match 'O', and almost all Formosan languages turn out to be ergative.

A considerable amount of my own work on Formosan languages (Starosta 1988a, 1997, 1998, 1999) has been devoted to proving and re-proving this claim, and I will only sketch the proof here.

1) Many languages, including most Formosan languages, have two distinct syntactic patterns headed by verbs that encode two arguments. One (AF in 'focus languages') encodes the notional Agent argument as nominative ('absolutive', 'pivot', 'topic') and the second complement as something else, and the other ('NAF' in Taiwan Formosanist analyses) encodes the notional Object, Locative, Beneficiary, or Instrument as nominative and the Agent as something else (Genitive in Formosan and Philippine languages).

(48) V$_{AF}$ 'S'
   –trns   Nom   Lcv/Abl/…
         Agent

(49) V$_{NAF}$ 'O'   'A'
   +trns   Nom   Gen
         Object   Agent
         Locative
         . . .

'That is, when the Bound Nominative pronoun manifests the agent participant, the verbal affix is *m-* (sometimes it can be *-m-* in Wulai dialect, or *-um-* in Mayrinax), as given in (1a) and (2a). This is Agent Focus (AF) construction, one of the common structures in Austronesian languages. When the Bound Nominative pronoun represents the patient participant, the verbal affix is then *-an* or *-un*, as examples (1b-c) and (2b-c) show. This is Non-Agent Focus (NAF) construction.' (Huang 1994b:4-5)

2) Two-argument AF verbs[40] share a pervasive morphological property, [m.. or [Cum.. initial sequences, with one-argument AF verbs, but NAF

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[40] Note that this is not a contradiction. In general, an intransitive verb can have any number of complements and adjuncts, just so long as none of them is AGT. *Rover*[AGT] *scratched the door*[PAT] is transitive, *Rover*[PAT] *scratched at*[LOC] *the door* is not. This point will be of crucial importance in this paper.

verbs do not have this shape. By grouping the two sets together, we capture a nice generalization with few exceptions: all AF verbs are morphologically intransitive, and vice versa.

3) Two-argument AF verbs share a syntactic property with one-argument AF verbs: one-argument and two-argument AF verbs allow only a single Nom clitic pronoun. In those languages that allow two clitics to coöccur, however, NAF verbs take Nom and Gen clitics. Conclusion: all AF verbs are syntactically intransitive.

'When the Bound Nominative pronoun represents the patient participant, the verbal affix is then -an or -un, as examples (1b-c) and (2b-c) show. This is Non-Agent Focus (NAF) construction…. As for Bound Genitive pronouns, they may either designate possessive relationship (e.g., [3a] and [4a]) or manifest the agent participant in NAF constructions…..' (Huang 1994b:5)

4) NAF verbs have the semantic properties which Hopper and Thompson (1980) described as semantically transitive, while contrasting two-argument AF verbs exhibit semantic intransitivity. Conclusion: AF verbs are semantically intransitive.

5) Bottom line: AF verbs are intransitive, 'NAF' verbs are transitive.

THE COUNTERCLAIM: Austronesian 'focus' is derivation

THE PROOF:

If focus is subject-verb agreement, then focus is inflection; but focus cannot be inflection, so it cannot be agreement.

Most of the evidence against treating Austronesian focus as inflection has been neatly summarized by Lawrence Reid:

'The voice system on the other hand has been treated by some as inflectional (De Guzman 1978, 1991) and by others as derivational (Bender 1988, Starosta 1986, 1988a)…. The system is viewed by others as derivational because probably no verb may take the complete set of voice affixes, that is they do not freely vary with each other within a paradigm; the choice of one affix rather than another usually marks a semantic distinction between the forms, and this meaning change is not always predictable[12]; and the agentive affixes derive intransitive verbs[13], while the non-agentive affixes always

derive transitive verbs. Traditionally, inflectional affixes do not carry over in derivation, but each of the voice affixes occur as noun-deriving affixes, in addition to their verbal functions. Furthermore, the disparate nature of the set with one infix, two suffixes and several prefixes suggests derivation (or at least a derivational origin) rather than inflection.' (Reid 1992:67-68)

'It was noted that both affix sets have been reconstructed as derivational, noun deriving affixes in Proto-Austronesian, and that voice affixation, for the reasons given above, is probably still derivational not only in Tagalog, but in all Philippine languages.' (Reid 1992:77-78)

4.3 Inflection is productive but focus is not

'*Inflection*, that is, is often taken to be completely *productive* in the typical case, while derivational processes are assumed to be limited in various idiosyncratic ways. It is certainly true that principles of case marking, agreement, etc. are usually quite independent of particular lexical choice and thus completely productive….' (Ford et al. 1997:556; emphasis mine)

Focus is often described as if it were productive, but in fact that is far from being the case. Four foci and four aspects, for example, should produce sixteen forms for every root, but they rarely do. Paradigms are typically riddled with idiosyncratic or systematic gaps. Thus although Saaroa has four foci and four aspects, it may have eleven gaps out of sixteen expected cells in the paradigm (Tsuchida 1976:72-74). More generally, it is difficult to find any examples at all of roots that appear in all four foci, which is one reason why the same Tagalog *..hiram..* 'borrow' examples keep appearing in the literature.[41]

Because inflection is productive, inflected forms (with the exception of 'principal parts' and exceptions) are not traditionally listed in lexical entries. In contrast, the

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[41] 'Many verbs are also members of focus ... inflections' (McFarland 1976:12).

If focus were inflection, this should be true of all verbs.

'Compared with Paiwan, which seems to show a pretty perfect parallel between the verb forms and the nominalized elements, Puyuma does not show such a one-to-one correlation' (Teng 2000:40).

'...while the morphemes <in> and -an occur in the indicative verb forms of many other Formosan languages,...,they appear mainly in the nominal elements in Puyuma (Teng 2000:41).

Again, if focus were verbal inflection, it should be productive system and absent from nouns, since inflection is not supposed to carry across in derivation.

practice in Ramos and Bautista's dictionary of Tagalog (Ramos and Bautista 1986) is to list separately all 'basic' (p. vii) or 'necessary' (p. v) occurring morphological shapes that contain the same root, with separate subentries for roots that have more than one meaning (pp. viii-ix), and assume the rest can be predicted from general inflectional tables. This is of course the lexicographic practice for derivation rather than inflection. Thus by contrast with the maximum of four inflected 'principal parts' listed in an entry in a Latin dictionary,[42] Ramos and Bautista's sample lexical entry for *abot* 'reach for' (pp. x-xii) lists 113 separate morphological shapes.[43]

4.4 Inflected forms alternate in the same syntactic slot but focus forms do not

According to Yung-li Chang, non-AF verbs can have one more argument than

---

[42] Examples:

agō	agere	ēgī	āctum	'to drive, lead, conduct'
dō	dare	dedī	datum	'to give, to offer'
faciō	facere	fēcī	factum	'to make, fashion, frame'
ferō	ferre	tulī	lātum	'to bear, carry'

[43] Here are the first seventeen entries as a sample:

ABOT

ACT OBJ

-um- -in 'reach for'

Indicative	AF	Inf.	umabót
		Perf.	umabot
		Imperf.	umaabot
		Cont.	aabot
		Rec. Perf.	kaáabot
	OF	Inf.	abutín
		Perf.	inabót
		Imperf.	inaabot
		Cont.	aabutin
Aptative	AF	Inf.	makaabót
		Perf.	nakaabot
		Imperf.	nakakaabot/nakaaabot
		Cont.	makakaabot/makaaabot
	OF	Inf.	maabót
		Perf.	naabot
		Imperf.	naaabot
		Cont.	maaabot

By contrast, the entry for *pahinga* 'rest' (pp.99-100) has only nine entries. If Tagalog focus were really inflection, each verb should have the same number of entries, and it should rarely be necessary to list them separately.

corresponding AF verbs (Chang 1999:621, 630). When they do, the two forms belong to different syntactic classes, and cannot be related by inflection. In the normal situation, though, there are paired two-argument intransitive ('AF') and transitive ('NAF') patterns. Again, the two forms belong to different syntactic classes, and thus cannot be related by inflection, though it is a normal situation in derivation.

4.5 The members of the paradigm differ semantically in unpredictable ways

The semantic difference between any two members of an inflectional paradigm is supposed to be consistent for all verbs. However,

'Second, the resulting stem *sra9i* may appear in the other VOICES…but not the CIRCUMSTANTIAL… This possibility appears with other roots, and <u>as happens</u> <u>in</u> <u>derivation</u>, it may be accompanied by semantic specialization; that is, the root without *s* and the derived stem with *s* may begin to diverge semantically….' (Huang 1993b, my underline)

4.6 The same focus morphology occurs in both nouns and verbs, and so carries over in derivation

'However, there is ***not*** much ***morphological difference in shape between a noun and a verb*** in Austronesian languages in general. Syntactic categories are determined by their syntactic function in a sentence.' (Li 2000:64; emphasis mine)
'There is little morphological marking for nominalization in Pazeh. A common type of prefix deriving a noun from a verb root or stem in Pazeh is indicated by *saa- ~ sa-* 'a tool for…'' For example:

2. <u>Nominal</u>   <u>Verbal</u>
   saa-ken 'food, side dish'   me-ken 'to eat'
   …   …
   saa-kudung 'hammer'   mu-kudung 'to strike or hit with a hammer'
   saa-xe'et 'string'   me-xe'et 'to tie with a string'
   saa-talek 'pan, pot'   mu-talek 'to cook'
   …   …

The forms with the prefix appear in the position of a noun, as in:

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3. alu,   ta-kazip-i   ki   saaken
   come   we-pick-imp   Nom   dishes
   'Come! Let's eat the dishes!'
4. saakudung   a   kaxa
   hammer   Lig   iron
   'an iron hammer'

However, the same prefixed forms also indicate Instrumental-focus (IF) and may occur in the initial position as the main verb of the sentence, as in:

5. saa-xe'et   nuang   ki   kahuy
   IF-tie   cow   Nom   tree
   'The tree is used to tie a cow.'
6. saa-talek   alaw   ki   bulayan
   IF-cook   fish   Nom   pan
   'The pan is used to cook fish'

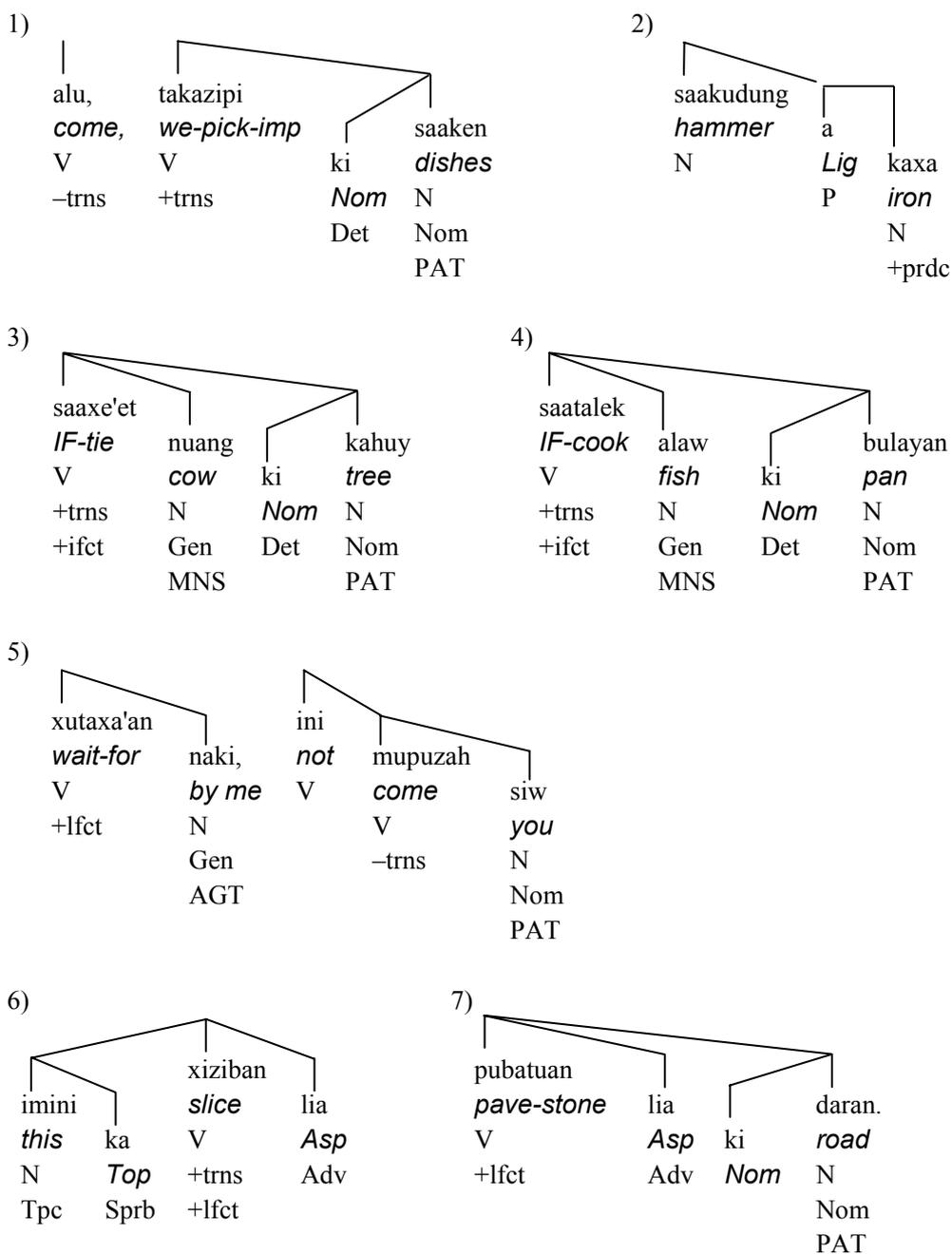Similarly, forms with the suffix *..an*] indicate a location. For example,

7. <u>Nominal</u>   <u>Verbal</u>
   …   …
   xutaxa'-an 'place to wait'   ma-xutaxa 'to wait'
   pu-batu-an 'a place paved'   pu-batu 'to pave with stones'

The suffix *..an*] also indicates Locative-focus (LF) in Pazeh. For example,

8. xutaxa'-an   naki,   ini   mu-puzah   siw.
   wait-LF   I/Gen   not   AF-come   you/Nom
   'I waited (for you), but you didn't come.'
9. imini   ka   xizib-an   lia.
   this   Top   slice-LF   Asp
   'This has been sliced'
10. pu-batu-an   lia   ki   daran.
    pave-stone-Loc   Asp   Nom   road
    'This road is paved with stones.'

(Li 2000:64-65)

Lexicase analyses of these examples are as follows:

1)

```
|
alu,        takazipi              saaken
come,       we-pick-imp      ki  dishes
V           V                    N
–trns       +trns            Nom Nom
                             Det PAT
```

2)

```
saakudung        a    kaxa
hammer           Lig  iron
N                P    N
                      +prdc
```

3)

```
saaxe'et   nuang          kahuy
IF-tie     cow       ki   tree
V          N              N
+trns      Gen       Nom  Nom
+ifct      MNS       Det  PAT
```

4)

```
saatalek   alaw           bulayan
IF-cook    fish      ki   pan
V          N              N
+trns      Gen       Nom  Nom
+ifct      MNS       Det  PAT
```

5)

```
xutaxa'an   naki,      ini   mupuzah        siw
wait-for    by me      not   come           you
V           N          V     V              N
+lfct       Gen              –trns          Nom
            AGT                             PAT
```

6)

```
            xiziban
imini   ka  slice    lia
this        V        Asp
N       Top +trns    Adv
Tpc     Sprb +lfct
```

7)

```
pubatuan     lia             daran.
pave-stone   Asp      ki     road
V            Adv      Nom    N
+lfct                        Nom
                             PAT
```

Exactly the same forms can appear as a noun or as a verb, and the general opinion

among researchers who use an Item-and-arrangement analysis seems to be that the morphemes in the corresponding forms are the same ones.

> 'In short, **both affixes**, *saa-* and *-an*, may function either as **nominal or verbal**. In other words, the **nominalizing and focus-affixing forms are identical**.' (Li 2000:65; emphasis mine)
>
> 'It has long been observed that the **morphemes** that **occur in indicative forms are also** used to form **nominalizations** in Philippine and Formosan languages (e.g., Ferrell 1982:17, 106).' (Rau 2000:2; emphasis mine)
>
> 'Moreover, since the *mo-*, *-eni*, and *-i* focus "inflections" and internal modifications **carry over in derivation**, it seems focus must also be considered derivation rather than inflection, by usual criteria (cf. Li 1973:5.0).' (Starosta 1974:355)

The following section adds more examples from Amis and Paiwan.

[sa..

8) Amis

M2010613003	pibacaq	'launder'	sapibacaq	'means of laundering'
M601104004.17a	sapalu'	'beat'	sapalu'	'stick'
Zeng Siqi 1991: 29 (my format)	senat	'to harrow'	sasenat	'harrow'
	tenuk	'to kick'	satenuk	'instrument for kicking: hind leg of animal'
	falud	'to bind'	safalud	'instrument for binding'
Fey 1986:372	asik	'to sweep'	saasik	'broom'

..an]

Atayal (Wulai), Huang 1993:34-36 (my formatting and interlinear glossing)

9) (57)b.
Ɂgalan̲ mu   qulih   hiraɁ
take   by me fish   yesterday
+lfct
'I caught a fish here yesterday.';
'the place I caught a fish yesterday'

10) (58)a.
   pman   hiʔ
   bathe   body
   +lfct   Gen
   'place to bathe (i.e., tub')
11) (58)b.
   pman   lqis
   bathe   face
   +lfct   Gen
   'sink/lavatory'
12) (60)a.
   mzywiʔ   laqiʔ
   play   child
   +afct   Nom
   'The child is playinq'
13) (59)b.
   pzyiʔan   laqi
   play   child
   +lfct   Gen
   'the place where the child plays'
14) (61)a.
   mtzyaw   mlikuy
   work   man
   +afct   Nom
   'The man worked.'
15) (61)b.
   ptzywagan   mlikuy
   work   man
   +lfct   Gen
   'the place where the man worked'

..un]

Atayal (Wulai), Huang 1993:35-36 (my formatting and interlinear glossing)

16) (60)a.
   mzywiʔ   laqiʔ
   play   child
   +afct   Nom
   'The child is playinq'

17) (59)a.

pzyiʔun   laqiʔ
play   *child*
+gfct   Gen
'the things the child wants to play'

18) (60)c.

pzyiʔun   mali   laqiʔ
play   *ball*   *child*
+gfct   prdc   Gen
'the ball the child wants to play with'

19) (61)a.

mtzyaw   mlikuy
work   *man*
+afct   Nom
'The man worked.'

20) (61)c.

ptzywagun   mlikuy
work   *man*
+gfct   Gen
'the work the man wants to do'

[mu..

Bunun

21) B101032   pinanaq   minanaq
               'shoot'   'shooter'

Tagalog

	Nominal		Verbal	
T201051	gumawa	'maker'	gumawa	'make'
T02080101a, T02080101b	tumakot	'frightener'	tumakot	'frighten'
T02080103b, T02080102b	pumatay	'killer'	pumatay	'kill'
T03120120b, T03120117a	gumulat	'surpriser'	gumulat	'surprise'
T=1001001b, T=1001001a	pumunta	'goer'	pumunta	'go'

Mixed

22) Pazeh (from Li, in this volume)

Nominal		Verbal	
saa-xe'et	'string'	saa-xe'et	'be used to tie with'
saa-talek	'pan, pot'	saa-talek	'be used to cook with'
xutaxa'-an	'place to wait'	xutaxa'-an	'be waited for'
pu-batu-an	'a place paved'	pu-batu-an	'be paved with'

23) Paiwan (from Ferrell 1982:17)

Nominal		Verbal	
q/m/uɬuts	'wrestler'	q/m/uɬuts	'wrestle' [AF]
k/m/an	'eater, one who eats'	k/m/an	'eat' [AF]
p/n/iqay	'one who wounds'	p/n/iqay	'to wound' [AF]
k/in/an	'already-eaten food'	k/in/an	'have eaten; have started eating'
tj/in/enun	'woven goods'	tj/in/enun	'have woven'
in-alap	'object which has been taken'	in-alap	'have taken'
kan-an	'place where eating occurs'	kan-an	'eat' [RF]
kan-en	'food'	kan-en	'eat' [OF]
alap-en	'object being taken'	alap-en	'to take' [OF]

So what is the bottom line? Exactly the same 'focus morphology' occurs in verbs and nouns in both the Pazeh and Paiwan examples. The pairs of words are clearly related to each other, and the relation has to be derivational, since inflection applies within a single word class, not across classes. Focus inflection carries over in nominalization, that is, in derivation between verbs and nouns. To use De Guzman's words, focus affixes are not 'unique to a particular syntactic class of words', and in fact they do 'become an inseparable part of the new lexical representation', traveling with it into strange new lexical domains.[44] So, regardless of which direction the derivation is taken to apply in (if any), focus morphology carries over in derivation. That is a sufficient condition for showing that it is not inflection.
Q.E.D.[45]

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[44] The evidence for this point turns out to be unexpectedly difficult to extract from the papers in this volume, though it is out there for the gathering.

[45] *Quod erat demonstrandum* 'that which was to be proved'; placed at the end of a mathematical proof.

5. Recentralization

Given all the evidence that exists in the literature, I think it would be very hard to continue to maintain that Austronesian focus is inflection, either agreement or voice. The only analysis consistent with the facts is that Austronesian focus is derivation. Then what does it derive? AF morphology of course encodes intransitive verbs and non-AF morphology encodes transitive verbs, but what about the distinction between the traditionally recognized three non-AF foci, PF/OF, LF, and BF/IF? In a paper on Tagalog (Starosta 1986), I suggested the term 'recentralization' to cover all four types, and I use the same analysis for Formosan languages. A more common term in other grammatical frameworks, one that originated in Bantu linguistics, is 'applicative'.

The lexicase analysis of such constructions begins with the observation that some transitive verbs impose a locational or instrumental or beneficiary interpretation on their Patients. These verb groups constitute separate semantic subclasses of the transitive class (i.e., [+trns, +lfct] 'locative effect', [+trns, +ifct] 'instrumental effect', or [+trns, +bfct] 'beneficiary effect') and each imposes a characteristic interpretation on its Patient. For example:

```
24)  The  team  has  reached            the   summit.
         AGT        +trns                PAT
         actr       +lfct                1ndex
                    1[+lctn, PAT]

25)  Willie  used          a   lighter     to ignite the skyrocket.
     AGT     +trns             PAT
     actr    +ifct             1ndex
             1[+nstr, PAT]

26)  Mordred   brought       Morgan le Fay another  black cat.
     AGT       +trns         PAT                     COR
     actr      +bfct         1ndex
               1[+bnfc, PAT]
```

A language may have other verbs which encode similar situations but which are grammatically and semantically different. For example, corresponding to sentences 24)-26) are other sentences 24')-26') which do not use verbs from these three classes:

```
24')  The  team has  arrived at the  summit.
           PAT       –trns            LOC
           actr      +lctv
```

25') Willie ignited the skyrocket with a lighter.
    AGT   +trns   PAT   MNS
    actr
26') Mordred brought another black cat for Morgan le Fay.
    AGT   +trns   PAT
    actr

In the framework of seamless morphology, when verbs in such clauses are found to be related situationally and formally, that relationship can be formalized in terms of an analogical Word Formation Strategy (WFS). Thus *brought* in 26) and *brought* in 26') are regularly related in a pattern which has many other examples in the language, so a WFS can be written to capture this fact:

WFS-3)

$$
\begin{bmatrix} +\text{trns} \\ +\text{bfct} \\ +\text{crsp} \\ \text{m[PAT]} \\ \text{n[COR]} \end{bmatrix} : \begin{bmatrix} +\text{trns} \\ \text{n[PAT]} \\ \text{m([COR])} \end{bmatrix}
$$

The rule states that a situational entity perceived and encoded as a PAT with one verb (e.g., *brought* in 26)) is perceived and encoded as an adjunct COR with another derivationally related verb homophonous (e.g., *brought* in 26')).

Before proceeding further, it should be reëmphasized here that lexicase case relations (PAT, AGT, LOC, COR, MNS) are <u>not</u> situational roles but rather perceptual ones. They differ from Fillmorean case relations, Chomskyan theta-roles, and Relational Grammar initial Grammatical Relations in that they encode perceptions, not situations. Thus because a situation may be perceived in different ways, the same objective entity may be encoded in more than one way. To cite a hoary Fillmorean example, 27) and 27') encode different views of roughly the same situation. The case roles are different because the perceptions are different: in 27) the PAT peanut butter is being moved to the surface of the LOC *cracker*, while in 27') the PAT *cracker* is being affected superficially by means of the MNS (Means) *peanut butter*.

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27) Seymour spread peanut butter on   the cracker.
    AGT   +trns PAT   LOC
    actr   +lctn
27') Seymour spread the cracker with   peanut butter.
    AGT   +trns   PAT   MNS
    actr   +lfct   1ndex
            1[PAT]

This point continues to be missed by some critics of the lexicase framework. Most recently, Videa De Guzman states,

> 'This [lexicase] account, however, is deemed problematic on the grounds that changing the semantic roles in derivationally-related verb forms runs counter to the conceptual notions associated with the verb forms as expressed by their co-occurring case relations.' (De Guzman 2000:237)

The lexicase claim of course is that a grammar based on such 'conceptual notions' rather than on perceptual roles is empirically inadequate, because it necessarily loses generalizations that can be readily captured in a perceptually based approach. This claim has been substantiated repeatedly in the lexicase literature by analyses and theory comparisons, beginning with Taylor 1972 and including, for example, Starosta 1974 and Starosta 1988b:121-126, 171-175). It would be impractical and probably futile to repeat those proofs here.

The next step in the presentation is to note that 'applicative' WFSs are often associated with regular differences in shape. This is true, for example, in German, Kiswahili, and Atayal.

German

28) Ich   bin   oft   auf   dieser Straße   gefahren.
    I   am   often on   this   street   driven
    PAT   LOC   −trns
    actr   +lctv
    'I have often driven on this street.'
28') Ich   habe   diese Straße oft   befahren.
    I   have   this   street often   driven-on
    AGT   PAT   +trns
    actr   4ndex   +lfct
                                  4[+lctn, PAT]
    'I have often driven this street.'

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The verb *gefahren* in 28) is a two-argument locational intransitive verb [–trns, +lctv] while the corresponding *befahren* in 28') is a locative-affect transitive verb [+lfct, +trns]. Sentence 28) encodes the moving object *ich* as a PAT and the path of the object *Straße* as LOC, while 28') encodes the path of the object as a PAT *Straße* and interprets it as locally affected. The relation between the pairs is overtly signaled by the initial string [*be*.. on the special-interpretation verbs.

29) (Duden 1978:1904)

Das	Medikament	nützt	bei	Kopfschmerzen.
The	*medicine*	*is of use*	*at*	*headaches*
PAT		–trns	COR	
actr		+crsp		

'The medicine is useful for headaches.'

29')

Du	kannst das	Medikament	auch	bei	Kopfschmerzen	benutzen.
you can	*the*	*medicine*	*also*	*at*	*headaches*	*use*
AGT		PAT		COR		+trns
actr		1ndex				+ifct
						1[PAT]

'You can also use the medicine for headaches.'

The noun *Medikament* 'medicine' is the actor in 29) but the instrumentally affected PAT in 29'). In both sentence pairs, 28) and 28') and 29) and 29'), the second member of the pair, the one that imposes a special interpretation on its PAT, begins with the string [*be*... The relation between *gefahren* and *befahren* is similar to *brought* in (26) and *brought* in (26'), but here the regular shape correspondence marks the difference and is encoded in the WFS.

WFS-4) 28) and 28')

$$
\begin{bmatrix} +\text{trns} \\ +\text{lfct} \\ m[\text{AGT}] \\ n[\text{PAT}] \end{bmatrix} : \begin{bmatrix} -\text{trns} \\ +\text{lctv} \\ m[\text{PAT}] \\ n[\text{LOC}]) \end{bmatrix}
$$

[*be*   :   [

The analysis adopted for these constructions is basically the same one adopted for Bantu 'applicative' constructions a number of years ago (Khamisi 1985; notation updated and internal boundaries removed):

Kiswahili

30) (Section 5.1, 17a.)

Sam	amekwenda	pwani
Sam	*went to*	*beach*
PAT	–trns	LOC
actr	+lctv	+lctn
	1[+lctn,LOC]	1ndex

'Sam went to the beach'

30') (Section 5.1, 17b.)

Sam	amepakwendea	pwani
Sam	*approached*	*beach*
AGT	+trns	PAT
actr	+lfct	3ndex
	3[+lctn,PAT]	+lctn

'Sam approached the beach'

Sentence 30) is intransitive, with a locational noun encoding a LOC; 30') is transitive, as indicated by the locative object agreement morphology *..pa..* and the derived applicative transitive *..e..* in the verb. The transitive verb *amepakwendea* interprets its PAT *pwani* as locationally affected, but for all grammatical purposes *pwani* is a 'direct object', that is, [PAT, Acc].

31) (Khamisi 1985, Chapter 5, 7b)

Sam	amekufa	kwa	ajili	ya	taifa
Nom	*died*	*for*	*sake*	*of*	*nation*
PAT	–trns	COR			

'Sam died for the sake of the nation.'

31') (Khamisi 1985, Chapter 5, 7c)

Sam	amelifia	taifa
Sam	*died for*	*nation*
Nom	+trns	Acc
AGT	+bfct	PAT
	1[PAT]	1ndex

'Sam died for the nation.'

32) (Khamisi 1985, Chapter 5, 11a)

Sam	ameandika	barua	kwa	unyoya
Sam	*wrote*	*letter*	*with*	*quill*
Nom	+trns	Acc	MNS	
AGT		PAT		

'Sam wrote a letter with a quill.'

32') (Khamisi 1985, Chapter 5, 11b)

Sam	ameuandikia	barua	unyoya
Sam	*wrote with*	*letter*	*quill*
Nom	+trns	Acc	Acc
AGT	+ifct	COR	PAT

'Sam wrote the letter with the quill.'

Again, the second members of all three pairs are grammatically transitive and the special interpretation of the PAT is marked by a formal difference, object agreement morphology and the pre-final 'applicative' string *..e..* in *amepakwendea* 30') and *..i..* in *amelifia* 31') and *ameuandikia* 32').

English, German, and Kiswahili are accusative languages. An ergative language differs from accusative languages in that an ergative language encodes its PAT in the Nominative case form. Applicative morphology will thus appear to impose its special interpretation on the Nom/grammatical subject/'pivot' instead of on the 'direct object'; it 'focuses on the subject'. Examples can be drawn from any Formosan or Philippine Austronesian language. The following examples are from Atayal:

<u>Atayal</u> (Huang 1994a, 1995; glosses and analyses adapted to fit the lexicase analysis; word-internal boundaries removed. The determiner *ʔiʔ* is a personal nominative determiner and *kuʔ* is a common nominative determiner.)

33) (Huang 1994b, 11a)

mitaal	ckuʔ	ʔulaqiʔ	ʔiʔ	watan
look-at	*to*	*child*		*Watan*
–trns		LOC		PAT
+lctv				actr

'Watan is looking at the child.'

33') (Huang 1995:52, 55a)

talan	nkuʔ	nabakis	kuʔ	ʔulaqiʔ
saw	*by*	*old man*		*child*
+trns		AGT		PAT
+lfct		actr		5ndex

5[+lctn, PAT]

'The old man saw the child.'

The [..*an*] in Atayal *talan* 'saw', like the [*be*.. in German *befahren* 'drive on', is a morphological indicator of locative-affect transitive derivation. The [*m*.. in Formosan and Philippine 'AF' forms marks intransitive verbs, and has no regular counterpart in English or German.[46]

In the lexicase ergative analysis, then, Nominative marks Patient (PAT), and 'focus' morphology marks different selectional interpretations imposed by the verb on its PAT. The same analysis has been applied in numerous other lexicase analyses of various languages, including most recently Fijian (Kikusawa 2000) and Guinaang Bontok (Reid, 2000). The following extended quote from Lawrence Reid (Reid 2000) nicely illustrates the application of the lexicase analysis:

> '**Focus**? Bontok, also like many other Philippine languages, has a rich set of derivationally related verbs. This system, in older descriptions of Philippine languages, has been referred to as the 'focus system'. This dictionary treats all so-called 'actor focus' verbs as intransitive verbs. It treats all 'non-actor focus' verbs as transitive verbs, distinguished not by the case of the grammatical subject, which in all cases is Patient, but by the presence of grammatical features (such as [lfct] 'locative effect' or [ifct] 'instrumental effect) on the verb. Since an ergative language is very different in structure from an accusative language like English, it is sometimes difficult to provide clear definitions of transitive verbs. Each definition of a transitive verb therefore includes a noun followed by the notation (PAT). In the English definition such nouns are usually the grammatical object of the verb in the definition, but the notation (PAT) signifies that that word would be the

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[46] The connection between these European and Austronesian construction types has also been recognized by Jan Voskuil (Voskuil 1995, 1996) and by Arthur Holmer:

'The former is similar to applicative constructions like those existing in many African languages ... and Germanic languages such as Swedish … We can, however, treat both focus and voice as basically a diathetic change with (in some cases) valency consequences' (Holmer 1996:17).

Patient of the verb being defined, and would therefore be the grammatical subject of that verb.

Affixes? This dictionary differs from other dictionaries of Philippine languages (and from my original Bontok-English Dictionary) by not talking about affixes, that is prefixes, suffixes, or infixes. The reason is that the linguistic theory which is used in the development of this dictionary, a theory called Lexicase Dependency Grammar, operates on the assumption that words are unanalyzable units. Words do not have any internal morpheme boundaries and therefore have no internal structure. It is true however that native speakers are aware of the patterns of similarity that exist between sets of derivationally related words and can consciously form new words by analogy with those patterns. These ways of forming words in a language are known as Word Formation Strategies. A grammar of the language of Bontok, for example, would include a large number of such analogically-based strategies. One such strategy would enable a child to form an intransitive verb with 'perfective aspect', from the corresponding 'imperfective aspect' form of that verb by analogy with other verbs it had learned that shared the same syntactic features. For example, an imperfective intransitive verb (V, [–trns], [–prfc]) , such as *in-emes* 'bathe' begins with the sounds [*in*…. By replacing that sequence with the sounds [*nin*…, which occur at the beginning of perfective intransitive verbs, the derivationally related word *nin-emes* 'bathed' is formed, which in addition to the feature [–trns] 'intransitive', carries instead the feature [+prfc].'

6. Conclusion

In terms of the goals of the conference which gave rise to this paper and the volume that contains it, we may conclude that evidence from nominalization, supported by extensive evidence from other areas of Formosan grammar, shows that 'focus' is derivation, not inflection, and that Formosan languages are ergative.

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南島語的「焦點屈折」是詞彙衍生：
名物化的證據

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本篇論文依據名物化的語料來佐證台灣及菲律賓南島語「焦點屈折」源自詞彙衍生，動詞藉由詞彙衍生將不同的觀點指派於所描述的情況。若將其他台灣南島學家所謂的「主事焦點」及「非主事焦點」分析爲「非及物」及「及物」，就可以發現幾乎所有台灣南島語言都屬於作格語言。此論文應用的理論架構結合依附文法與無縫構詞學。

關鍵詞：呼應，衍生，作格性，焦點，屈折，名物化，及物性，態