# Escaping ethnocentrism in the study of word-class universals

Martin Haspelmath

## 1. Nonapriorism vs. apriorism

The problem of which word-classes (or "lexical categories") should be set up for an unfamiliar language can be approached in two different ways. One can start out by asking either of the two questions in (1)-(2):

(1) Which categories allow the most elegant description of the language?
(2) Can the language be described in terms of a universal set of categories, hypothesized on the basis of other languages?

Question (1) is the question that Franz Boas urged us to start out with: Each language should be described "in its own terms" (Boas 1911), in a nonaprioristic way, and many other 20th century linguists agreed (e.g. Bloomfield 1933, Martinet 1960, Dixon 1997). In the 19th century and earlier, linguists had not worried much about the issue. Languages spoken by peoples living in small communities outside the big empires were rarely thought of as worthy of scientific study and were mostly left to applied linguists (missionaries). But as the 20th century approached, more and more intellectuals came to accept that from an anthropological point of view, all cultures and languages (and "races") had the same value, even if there were obvious differences in the distribution of wealth and social complexity. Studying a small tribe on an island in the Pacific Ocean (e.g. Malinowski 1922) can make the same contribution to the understanding of humankind as the study of the Pyramid texts or Kafka's novels. Ethnocentrism is detrimental to science, and each culture should be assessed in its own terms.

But since the 1960s, many linguists have adopted a rather different, aprioristic approach: Following Chomsky (1957) and subsequent work in the generative tradition, they have assumed that structural categories of language are universal, and that all languages have the same basic building blocks: distinctive features in phonology (Chomsky & Halle 1968), argument-classes ("grammatical relations", Perlmutter 1980), word-classes ("lexical categories", Baker 2003), and many others. They are thus asking question (2) and leaving question (1) aside, adopting an aprioristic point of view. This does not mean that languages of non-state societies are considered to have less value, of course, but it does mean that the fundamental questions of linguistic science can equally well be approached by focusing on the bigger languages in the rich countries. As a result, the relative prestige of research on understudied languages dropped considerably. This was of course not intended by the promotors of the aprioristic viewpoint, who were simply more concerned with discovering the cognitive (and hence universal) foundations of language. But it also follows from another feature of the generative research

programme: No serious attempt was generally made to base the hypothesized aprioristic categories on empirical cross-linguistic research. The categories that seemed to work for English and other big European languages (Latin, French, German) were hypothesized to be universal, and linguists asked questions such as:

(3)  a. Do we find evidence for the word-affix distinction? (e.g. Zwicky & Pullum 1983)
     b. Do we find evidence for the argument-class of subject? (e.g. Anderson 1976)
     c. Do we find evidence for the distinction between adjectives and verbs? (e.g. McCawley 1992, Dixon 2004, Chung 2012)

Categories such as word, affix, subject, adjective and verb were simply adopted without discussion from the well-known descriptions of European languages, despite the fact that Boasian linguists had previously pointed out their non-universality (cf. Bach 2004: 56-57). A positive answer to the questions in (3) was then taken as evidence for the aprioristic position.

But there are very serious problems with this approach, which have generally been overlooked by generative linguists and which I would like to highlight here, using Chung's (2012) arguments in favour of a noun-verb-adjective tripartition in Chamorro as a concrete example. But the general points (raised in a similar way in Croft 2001[1]) have much wider relevance.

Unfortunately, the fact that these problems were overlooked, and that even linguists who invested much energy into understudied languages adopted an aprioristic perspective, resulted in a situation where understudied languages cannot have a real impact on foundational issues of linguistics. But I will end this comment on a more positive note, showing that Boasian categorial particularism is not incompatible with the search for universals.

## 2. From properties to categories

Chung's lucid description of the relevant Chamorro facts, of Topping's (1973) nonaprioristic analysis, and of her own aprioristic counterproposal makes it easy to point to the fundamental problem.[2] In this section, I will show that from the point of view of Chamorro, Chung's system is not better motivated than Topping's, on the contrary. Thus, Chung imposes a system on Chamorro that is mainly motivated by other considerations (probably by the unstated influence of English).

For the sake of this discussion, I will assume that all the relevant grammatical properties have been described correctly by Chung, which are those of Table 1 (an extension of Chung's table in her (38)).

---

[1] Chung says that "Croft denies the existence of formally defined syntactic categories with discrete boundaries", but this is a misunderstanding of Croft's position. Croft recognizes formally defined discrete syntactic categories, but not universal syntactic categories. Only prototypes (reflected in implicational universals, see §4 below) are universal, however.

[2] Note that I have nothing to say on the issue of multifunctional words and conversion. I agree with most of what Chung has to say in her §5, but these issues are orthogonal to the issues discussed here, i.e. the question of the distinction between nouns, adjectives and (intransitive) verbs.

**Table 1. Seven properties of different kinds of words in Chamorro**

|   | property | 'see'-type words | 'go'-type words | 'big'-type words | 'person'-type words |
|---|---|---|---|---|---|
| 1 | Passive | + | – | – | – |
| 2 | *Yo'*-type Pronoun Subject | – | + | + | + |
| 3 | Infinitive | + | + | + | + |
| 4 | Incorporation | – | – | – | + |
| 5 | Prefixation with *mi-* | – | – | – | + |
| 6 | Subject-Predicate Agreement | + | + | + | – |
| 7 | Specific External Argument | + | + | – | – |
| 8 | Person-Number Agreement (Realis) | + | – | – | – |
|   |   | Transitival | Intransiverb | Adjectival | Nominal |

We are thus dealing with four different elementary categories at the lowest level, which we may label Transitival ('see', Topping's Class I), Intransiverb ('go'), Adjectival ('big') and Nominal ('person'). (The labels are capitalized, because we are dealing with language-specific categories at this point of the discussion, cf. Croft 2001: 50, Haspelmath 2010: §6).

This system of four word-classes would be sufficient to describe the language, but the description might not be maximally elegant, because some rules would have to be stated by a disjunction of categories, e.g. the Specific External Agent rule would have to be restricted to the set {Transitival, Intransiverb}. Having a category "Verb" would make this rule simpler to state. Moreover, no rule refers to Intransiverbs exclusively or to Adjectivals exclusively, so that one may wonder whether these deserve to be major categories.

We therefore ask whether higher-level categories, obtained by collapsing some of the lower-level categories, yield a more elegant category set. Setting up higher-level categories is straightforward when the properties do not cross-classify the elementary categories, so that a simple feature tree can be set up. Consider a simplified picture of the situation in Latin (as described by medieval grammarians), where we only consider the properties of availability of case and of variable gender. The properties relevant in this context are shown in Table 2.

**Table 2. Two properties of different kinds of words in Latin**

|   |   | *videre* 'see' | *magnus* 'big' | *homo* 'person' |
|---|---|---|---|---|
| 1 | Case [±case] | – | + | + |
| 2 | Variable gender [±var. gender] | (n.a.) | – | + |

This yields the straightforward classification in Table 3, with the familiar two major categories *verbum* (verb) and *nomen*, the latter subclassified into *nomen substantivum* (noun, substantive) and *nomen adjectivum* (adjective).

**Table 3. Feature characterization of Latin verbs, substantives and adjectives**

| verbum<br>[−case] | nomen<br>[+case]<br>[±var. gender] | |
|---|---|---|
| | nomen substantivum<br>[−var. gender] | nomen adjectivum<br>[+var. gender] |

In Chamorro, given the picture in Table 1, no such simple tree can be set up, but a number of different possibilities for grouping the elementary categories exist. There are six logical possibilities, listed in Table 4.

**Table 4. The six logically possible higher-level word-class systems of Chamorro**

| A | Transitival + Intransiverb | | Adjectival + Nominal | |
|---|---|---|---|---|
| B | Transitival | Intransiverb + Adjectival + Nominal | | |
| C | Transitival + Intransiverb + Adjectiverb | | | Nominal |
| D | Transitival + Intransiverb | | Adjectival | Nominal |
| E | Transitival | Intransiverb | Adjectival + Nominal | |
| F | Transitival | Intransiverb + Adjectival | | Nominal |

Which of these groupings into higher-level categories yields the most elegant system? To see this, we need to set up features on the basis of Table 1, analogous to the features [±case] and [±variable gender] in Table 2. Let us give the names in Table 5 to the binary features that can be used to group the low-level categories.

**Table 5. Binary features for Chamorro**

| Transitival<br>'see' | Intransiverb<br>'go' | Adjectival<br>'big' | Nominal<br>'person' | supported by<br>properties |
|---|---|---|---|---|
| Transitival [+tr] | Intransitival [−tr] | | | 1, 2, 8 |
| Adjectiverbal [−n] | | | Nominal [+n] | 4, 5, 6 |
| Verbal [+v] | | Adjectinominal [−v] | | 7 |

Now we can characterize each of the higher-level groupings of Table 3 in terms of these features, as shown in Table 6. When a category can be associated with two different feature values, i.e. when it is cross-classified, this is shown by "±". In such cases, further subclassification of the major categories is necessary (as acknowledged by Chung in §4.5).

**Table 6. Feature characterization of the six logically possible higher-level word-class systems of Chamorro**

| A | **Verbal** [+v]<br>[±tr]<br>[−n] | **Adjectinominal** [−v]<br>[−tr]<br>[±n] |
|---|---|---|
| B (Topping 1973) | **Transitival**[+tr]<br>[−n]<br>[+v] | **Intransitival** [−tr]<br>[±n]<br>[±v] |
| C | **Adjectiverbal** [−n]<br>[±tr] | **Nominal** [+n]<br>[−tr] |

| | [±v] | | [−v] |
|---|---|---|---|
| D (Chung 2012) | **Verbal** [+v]<br>[±tr]<br>[−n] | **Adjectival**<br>[−tr]<br>[−n]<br>[−v] | **Nominal** [+n]<br>[−tr]<br>[−v] |
| E | **Transitival** [+tr]<br>[−n]<br>[+v] | **Intransiverb**<br>[−tr]<br>[−n]<br>[+v] | **Adjectinominal** [−v]<br>[−tr]<br>[±n] |
| F | **Transitival** [+tr]<br>[−n]<br>[+v] | **Intransiadjectiverbal**<br>[−tr]<br>[−n]<br>[±v] | **Nominal** [+n]<br>[−tr]<br>[−v] |

Of the six possible systems, A–C have the advantage of having only two major word classes, while D–F have three (and thus only one less than the elementary system of Table 1). Moreover, they only have major classes that can be characterized by a single feature, whereas systems D–F have major classes that can be characterized only by the intersection of several features. System B (Topping's system) may be seen to have the advantage over system A that only one of the major classes is subclassified (though it has no advantage over system C). Within the three-class systems, Chung's system D is better than system F, where the class that is not uniquely characterized ("Intransiadjectiverbals") needs to be subcategorized, but it is not so clear that system D is superior to system E, where Transitivals and Intransiverbs are major classes, and Adjectinominals need to be subclassified.

If one assigns different weights to the binary features in Table 5, giving less weight to [±v], which is supported only by a single (fairly subtle) property, then system F becomes the best three-class system, and system A is inferior to system B and C. Thus, if one makes these assumptions, then Topping's system looks better than Chung's.

Overall, however, it is not clear that three-class and two-class systems are significantly more elegant than the elementary four-class system of Table 1, due to the fact that subclassification is needed in any system. Which system one prefers seems to have a lot to do with esthetic judgements, which are not properly part of scientific investigations.

## 3. The motivation for Chung's category system

At this point one might object that I have not been fair to Chung because she does not claim that her system yields a more elegant category system than Topping: All she claims is that in Chamorro, evidence for her proposed system can be found. The fact that one can also find evidence for alternative systems is irrelevant to Chung, because she does not consider these systems. The reason she is happy with her results is that she did not ask question (1) of §1, but question (2): whether Chamorro can be described in terms of verbs, adjectives and nouns. The answer to this is positive, hence Chamorro is taken to support the aprioristic, categorial universalist position of generative linguistics.

But what motivates question (2) in the first place? This is never made explicit by generative grammarians, and strictly speaking, there is no need to motivate a hypothesis.

If the evidence supports the hypothesis, isn't this sufficient motivation to set up the hypothesis?[3]

Unfortunately, the answer to this is no: In scientific methodology, evidence needs to provided to reject the null hypothesis (the most general, least surprising hypothesis), not to support a specific hypothesis. But on the basis of the facts of Chamorro and other languages, can we reject the more general hypothesis in (4), which might be suggested by the situation in Chamorro?

(4) All languages can be described in terms of the universal set of four categories transitival, intransiverb, adjectival, and nominal.

It seems that we cannot easily reject this hypothesis. Not only Chamorro is consistent with it (see Table 1), but many other languages as well. English is normally described in terms of verbs, adjectives and nouns, but evidence for distinguishing transitivals and intransiverbs can easily be found in English (and many other languages), so English could alternatively be described in terms of a four-class system. According to Dixon's (2004) cross-linguistic work, adjective-verb distinctions and/or adjective-noun distinctions are made in all languages, and a language with absolutely no noun-verb distinction has not been found either yet (see Dixon 2010: ch. 11). So if we allow any kind of property to justify setting up a category, then (4) is quite likely true.[4]

Thus, all that Chung has shown is that Chamorro can be analyzed in an English-like manner, but it is also fairly evident that English can be analyzed in a Chamorro-like manner. We have learned something new from Chung's paper only if we assign priority to English, i.e. if the hypothesis that all languages are English-like is intrinsically more interesting than the alternative hypothesis in (4).

And here Boas's anti-ethnocentric stance becomes highly relevant again. In a Boasian mode of thinking, one would take great pains not to give priority to one's own language when studying linguistic diversity. Unfortunately, linguists who disregarded the Boasian imperative have all too often fallen into the trap of ethnocentrism. The cases of the word-affix distinction set up (largely) on the basis of Western languages with orthographic word separation (cf. Haspelmath 2011), the universal subject category set up on the basis of English (cf. Foley & Van Valin 1977, Dryer 1997), and the description of bound person forms in terms of the "pronoun" and "agreement" concepts (Haspelmath 2012) are just three particularly salient examples.

Sometimes generative linguists have provided additional evidence that the description in terms of the aprioristic categories is the most elegant one, something that Chung

---

[3] This attitude seems to explain Chung's claim (in the third last paragraph of her paper) that the denial of universal syntactic categories represents a "confusion of a theoretical notion with the grammatical generalizations that make use of that notion". Universal syntactic categories are theoretical hypotheses, and in generative grammar hypotheses are often taken to be supported by simple consistency with data.

[4] Moreover, it seems that in most languages, *some* evidence for lumping transitivals and intransiverbs into a "verbal" category can be found, *some* evidence for lumping verbals and adjectivals into adjectiverbals can be found, and *some* evidence for lumping adjectivals and nominals into adjectinominals can be found. If *any* kind of evidence is allowed for grouping words into word-classes, then perhaps all of the systems of Table 5 are found universally. Thus, for typological purposes, it is more productive to privilege some criteria over others, as is done in Hengeveld (1992) and Hengeveld et al. (2004), where only the coding of nouns, verbs, adjectives and manner adverbs in their main syntactic functions is taken into account.

does not do in her article. But usually in such cases, they have considered only one or two alternatives, and rarely the full range of relevant properties. For this reason, the exercise of §2 was useful: We see that Chung's proposed system is just one out of six or seven possibilities, and with the data that we have, it is not easy to rule out any one of them.

Thus, we have seen that a positive answer to question (2) cannot be taken as supporting the aprioristic generative approach.

## 4. How can understudied languages have a real impact on linguistics?

In the preceding, I argued that on the Chomskyan, aprioristic approach, small languages studied by few linguists cannot have a real impact on general questions of linguistics for two reasons: (1) because aprioristic category hypotheses tend to be set up on the basis of the major languages, and (2) because there is generally very little support for the claim that the aprioristic categories are the only possible or the optimal ones. Instead, generative linguists normally limit themselves to providing evidence for or against an extremely narrow range of selected possibilities.

But there are two ways in which understudied languages could have an impact. The first is a route that has actually been taken by a number of generative linguists, who have adopted categories from understudied languages and have asked whether these can be found in less clearly visible form in the more familiar languages as well. Thus, the notions (or at least terms) "ergative" (Burzio 1986), "incorporation" (Baker 1988) and "applicative" (Pylkkänen 2008) have been adopted, in much more abstract form, for many more phenomena than they were originally applied to. This kind of move has successfully attracted more attention to the less familiar languages from which the terms originate, which as a result have been studied more extensively. (These studies still suffer from problem (2) of the preceding paragraph, but not from problem (1), i.e. they suffer from the problems of apriorism, but not from the problems of ethnocentrism.)

The other way in which understudied languages can contribute to general linguistics is simply by providing evidence for or against implicational universals of the type identified by Greenberg (1963). To identify general properties of the grammars of human languages, we need to examine a sufficiently large and reasonably representative set of languages that have not influenced each other in recent times, so we have to take them from all corners of the earth. In typological work such as Dryer (1992), Bybee et al. (1994), Wetzer (1996), Cristofaro (2003), Siewierska (2004), or Haspelmath et al. (2005), understudied languages play exactly the same role as the big languages. The work in this tradition is non-aprioristic (Haspelmath 2007, 2010), and each language has the same chance to contribute to the generalizations formulated by the comparative linguist. In this line of research, comparative and descriptive linguists are members of a single community contributing to the overall goal in different ways. It is no accident that the study of small languages is mostly conducted in this Greenbergian framework, rather than in the Chomskyan framework.

In the domain of word-classes, examples of implicational universals are the universals proposed by Croft (1991), Stassen (1997) and Hengeveld et al. (2004). As a concrete example, consider the generalization in (5) (Croft 1991: 82, Stassen 1997; see also Baker 2008 for discussion).

(5) On the implicational scale "thing word > property word > action word", if a higher word-class exhibits subject person indexing, then all lower word-classes also exhibit subject indexing.

So there are languages like Latin (with subject indexing only on action words), languages like Maricopa (with subject indexing on action words and property words), and languages like Turkish (with subject indexing on all three types of words). Other logically possible language types are not attested.

   It seems that the universal hypothesis in (5) has a good chance of being true (at least as a strong tendency). In contrast to the categorial universalist hypothesis that all languages have nouns, verbs and adjectives, (5) is quite easy to falsify (i.e. one does not even need the kind of intensive, in-depth study of understudied languages that Chung is calling for, quite rightly, of course), and the available evidence is NOT compatible with the more general null hypothesis (that subject indexing can be found on any subset of word-classes in a language). Without studying a substantial number of understudied languages, the universal in (5) could not have been discovered. It represents a universal, deep property of human language, but it is not formulated in terms of universal categories. The concepts 'thing word', 'property word', 'person indexing' etc. are comparative concepts (Haspelmath 2010) and are fully compatible with the nonaprioristic Boasian view that each language has its own system of categories. Thus, Boasian categorial particularism and Greenbergian universalism are fully compatible. The assumption of aprioristic universal categories is not necessary. This is an approach to comparative linguistics that Chung does not seem to even consider.

## 5. Conclusion

I conclude that Chung's word-class system is not an improvement over Topping's, though she has successfully shown that Chamorro could be described in terms of nouns, verbs and adjectives, in the manner familiar from European languages. But since the properties of the four elementary word-classes (of Table 1) exhibit cross-classification, there is not one single optimal system of major word-classes. In addition to the simple four-class system, six different three-class or two-class systems could be set up.

   Thus, looking for universal word-classes (or "lexical categories") in the manner of Baker (2003) and Dixon (2004) does not seem to be the best way to find regularity within the diversity of languages. Moreover, the assumption of universal categories carries the very real danger of ethnocentrism, as when one starts out with the assumption that the categories familiar from European languages (such as verb vs. adjective, word vs. affix, pronoun vs. agreement) are universal and takes compatibility of evidence from non-European languages with these categories as evidence for their universality.

   Before concluding that the Western concepts are universal, one should always take the opposite perspective of a (hypothetical) non-Western linguist approaching a European language: Could English be described with a Chamorro-based system of four word-class categories? Could German be described with a Chinese-based system of units that merely distinguishes between full morphs and empty morphs (not between words

and affixes)? Could French be described with a notion of person indexes (*je-viens* 'I come', *tu-viens* 'you come', etc.), rather than with the notions of pronoun and agreement (Haspelmath 2012)? If the answer could be positive, then one should look for less ethnocentric ways of characterizing similarities and differences between languages.

## References

Anderson, Stephen R. 1976. On the notion of subject in ergative languages. In Charles N. Li (ed.), *Subject and topic*, 1-23. New York: Academic Press.

Bach, Emmon. 2004. Linguistic universals and particulars. *Linguistics today – Facing a greater challenge*, ed. by Piet van Sterkenburg, 47–60. Amsterdam: John Benjamins.

Baker, Mark C. 2003. *Lexical categories: verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.

Baker, Mark C. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press.

Bloomfield, Leonard. 1933. *Language*. New York: H. Holt and Company.

Boas, Franz. 1911. Introduction. In Franz Boas (ed.), *Handbook of American Indian Languages*, 1-83. Washington, DC: Bureau of American Ethnology.

Burzio, Luigi. 1986. *Italian syntax: a government-binding approach*. Dordrecht: Reidel.

Bybee, Joan L., Revere D. Perkins & William Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. Chicago: University of Chicago Press.

Chomsky, Noam & Morris Halle. 1968. *The sound pattern of English*. New York: Harper & Row.

Chomsky, Noam A. 1957. *Syntactic structures*. 's-Gravenhage: Mouton.

Chung, Sandra. 2012. Are lexical categories universal? The view from Chamorro. *Theoretical Linguistics* target article

Cristofaro, Sonia. 2003. *Subordination*. Oxford: Oxford University Press.

Croft, William. 1991. *Syntactic categories and grammatical relations: the cognitive organization of information*. Chicago: University of Chicago Press.

Croft, William. 2001. *Radical construction grammar: syntactic theory in typological perspective*. Oxford: Oxford University Press.

Dixon, R.M.W. 1997. *The rise and fall of languages*. Cambridge: Cambridge University Press.

Dixon, R.M.W. 2004. Adjective classes in typological perspective. In R.M.W Dixon & Alexandra Y. Aikhenvald (eds.), *Adjective classes: A cross-linguistic typology*, 1–49. Oxford: Oxford University Press.

Dixon, R.M.W. 2010. *Basic linguistic theory*. Vol. 2. Oxford: Oxford University Press.

Dryer, Matthew S. 1992. The Greenbergian word order correlations. *Language* 68(1). 81–138.

Dryer, Matthew S. 1997. Are grammatical relations universal? In Joan L. Bybee, John Haiman, & Sandra A. Thompson (eds.), *Essays on Language Function and Language Type: Dedicated to T. Givón*, 115-143. Amsterdam: Benjamins.

Foley, William A. & Robert D. Van Valin Jr. 1977. On the viability of the notion of "subject" in universal grammar. *Berkeley Linguistics Society* 3. 293-320.

Greenberg, Joseph H. 1963. Some universals of grammar with particular reference to the order of meaningful elements. In Joseph H. Greenberg (ed.), *Universals of language*, 73-113. Cambridge, MA: MIT Press.

Haspelmath, Martin, Matthew S Dryer, David Gil, & Bernard Comrie (eds.). 2005. *The world atlas of language structures*. Oxford: Oxford University Press.

Haspelmath, Martin. 2007. Pre-established categories don't exist: consequences for language description and typology. *Linguistic Typology* 11. 119 - 132.

Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in cross-linguistic studies. *Language* 86(3). 663-687.

Haspelmath, Martin. 2012. Argument indexing: a conceptual framework for the syntactic status of bound person forms. (Forthcoming)

Hengeveld, Kees, Jan Rijkhoff & Anna Siewierska. 2004. Parts-of-speech systems and word order. *Journal of Linguistics* 40(3). 527–570.

Hengeveld, Kees. 1992. *Non-verbal predication: theory, typology, diachrony.*. Berlin: Mouton de Gruyter.

Malinowski, Bronisław. 1922. *Argonauts of the western Pacific: an account of native enterprise and adventure in the archipelagoes of Melanesian New Guinea*. London: Routledge & Sons.

Martinet, André. 1960. *Éléments de linguistique générale*. Paris: Armand Colin.

McCawley, James D. 1992. Justifying part-of-speech assignments in Mandarin Chinese. *Journal of Chinese Linguistics* 20(2). 211–246.

Perlmutter, David M. 1980. Relational grammar. In Edith A. Moravcsik & Jessica R. Wirth (eds.), *Current approaches to syntax*, 195–229. (Syntax and Semantics 13).

Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, Mass.: MIT Press.

Siewierska, Anna. 2004. *Person*. Cambridge: Cambridge University Press.

Stassen, Leon. 1997. *Intransitive predication*. Oxford: Oxford University Press.

Topping, Donald. 1973. *Chamorro reference grammar*. Honolulu: University Press of Hawaii.

Wetzer, Harrie. 1996. *The typology of adjectival predication*. Berlin: Mouton de Gruyter.

Zwicky, Arnold M. & Geoffrey K. Pullum. 1983. Cliticization vs. inflection: English n't. *Language*. 502–513.