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POSSESSORS AND DEFINITENESS EFFECTS IN TWO AUSTRONESIAN LANGUAGES

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1 INTRODUCTION

The definiteness effects that form the backdrop to this paper were first investigated by Milsark (1974, 1977) in his pioneering work on the syntax and semantics of English existential sentences.¹ Milsark (1977) observed that the pivots of existential clauses must be *weak*. He also observed that the subjects of what are now called individual-level predicates must be *strong* (see also Postal 1969 and Carlson 1977). These definiteness effects, repeated below, will be referred to here as DE1 and DE2.

(1) *Two definiteness effects*

DE1: The pivot of an existential clause must be weak.

DE2: The subject of an individual-level predicate must be strong.

The definiteness effects work in tandem with Milsark's classification of DP's as weak or strong to describe some intricate empirical patterns. To see this, consider the very partial version of his classification that is given in (2), following Ladusaw (1994). The classification

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identifies some DP's as simply weak (e.g. *sm* NP),² others as simply strong (e.g. *every* NP), and still others as weak in one interpretation but strong in another (e.g. bare plurals).

(2) *A partial snapshot of weak and strong DP's in English*

WEAK	STRONG
<i>sm</i> NP	
bare plurals [cardinal]	bare plurals [generic]
<i>many</i> NP [cardinal]	<i>many</i> NP [proportional]
<i>few</i> NP [cardinal]	<i>few</i> NP [proportional]
etc.	<i>every</i> NP
	<i>all</i> NP
	<i>the</i> NP
	pronouns
	proper names
	etc.

What DE1 says is that the pivots of existential clauses must be chosen from the left-hand column of (2); what DE2 says is that the subjects of individual-level predicates must be chosen from the right-hand column. These claims are illustrated by the examples below. In existential clauses, the pivot must be weak. It can, for instance, be a DP headed by *sm* or a bare plural with a cardinal interpretation, but it cannot be a DP headed by *every*; and in the absence of context, it cannot be a proper name.³

- (3)
- a. There are *sm* students at the back of the lecture hall.
 - b. There are students at the back of the lecture hall. [= at least two students]
 - c. *There is every student at the back of the lecture hall.
 - d. %There is Meg at the back of the lecture hall.

In clauses with individual-level predicates, the subject must be strong. It can, for instance, be a bare plural with a generic interpretation, a DP headed by *every*, or a proper name, but not a DP headed by *sm*.

- (4)
- a. **Sm* students are neurotic.
 - b. Students are neurotic. [= the generic student]
 - c. Every student is neurotic.
 - d. Meg is neurotic.

² *Sm* is Milsark's representation of unstressed *some*.

³ In (3d), % indicates that context is required for well-formedness. See Ward and Birner (1995) for evidence that in context, the pivot can be a pronoun, proper name, or definite DP.

Elsewhere, when the clause is not existential and the predicate is not individual-level, the weak-strong distinction is irrelevant, as (5) shows.

- (5) a. Sm students are available.
 b. Students are available. [= at least two students, or the generic student]
 c. Every student is available.
 d. Joe is available.

Since Milsark's original research, many others have attempted to construct syntactic, semantic, or pragmatic theories from which DE1 or DE2 might follow. But despite the intensity of this research effort, no consensus has emerged on what the ultimate account of either effect might be. (For a sampling of approaches to DE1, see e.g. Safir 1985, Reuland and ter Meulen 1987, Lumsden 1988, Freeze 1992, McNally 1992, Zucchi 1995, Keenan 2003, and Hazout 2004; for DE2, see Carlson 1977, Diesing 1992, Ladusaw 1994, and Kratzer 1995.) The tack I take here will be to try to get at this larger issue by probing one particular corner of the weak-strong distinction—the phenomenon of *possessor dominance*.

Under certain conditions in certain languages, the strength or weakness of a possessed DP is determined by the strength or weakness of the possessor. This phenomenon, which I call possessor dominance (PD), has been investigated in several familiar Indo-European languages; see e.g. Woisetschlaeger (1983), Barker (2000), and Rawlins (2006) on English, and Milner (1982) and Flaux (1992, 1993) on French. However, little is known about PD cross-linguistically, or about what the phenomenon can tell us about the best account of the definiteness effects (but see Rawlins 2006 on DE1). In what follows, I add to the cross-linguistic documentation of PD by exploring possessors and definiteness effects in two Austronesian languages, Maori and Chamorro. I then use the Chamorro version of PD to argue that DE2 does not follow from the syntax of Logical Form, as proposed by Diesing (1992), but rather from a semantics-pragmatics enriched by the Brentano-Marty-Kuroda theory of judgment types, as proposed by Ladusaw (1994).

Section 2 of this paper uses PD in English to raise some initial questions about what one might expect of the PD phenomenon cross-linguistically. With these questions in hand, I turn to the languages under investigation: Maori, a Polynesian language of New Zealand, and Chamorro, a Western Malayo-Polynesian language of the Mariana Islands. Section 4 establishes that Maori has both of Milsark's definiteness effects, but no PD; hence, PD is not universal. Section 5 establishes a more intricate pattern for Chamorro. This language has both of Milsark's definiteness effects, plus a third, language-particular definiteness effect, but it exhibits PD only for the purposes of DE2. Section 6 argues that the Chamorro version of PD cannot be dismissed as some completely different phenomenon. In section 7, I show that Ladusaw's (1994) semantic-pragmatic account of DE2 can be generalized to PD in Chamorro,

but Diesing's (1992) syntactic account of DE2 cannot. This provides the argument in favor of a semantic-pragmatic explanation of this definiteness effect. Finally, Section 8 concludes.

2 POSSESSOR DOMINANCE IN ENGLISH

The idea that the strength or weakness of possessed DP's in English is determined by the strength or weakness of the possessor goes back to Woisetschlaeger (1983), who attributes the observation to Ray Jackendoff. Consider the existential clauses in (6), in which the pivot is a possessed DP. What Jackendoff noticed is that exactly when the *possessor* of the pivot is weak, the existential clause is well-formed. For instance, the possessor can be a DP headed by *sm* (6a) or a bare plural with a cardinal interpretation (6b), but it cannot be a DP headed by *every* (6c); and in the absence of context, it cannot be a proper name (6d).

- (6) a. There are [sm students]' notebooks at the back of the lecture hall.
 b. There are [students]' notebooks at the back of the lecture hall. [= at least two students]
 c. *There are [every student]'s notebooks at the back of the lecture hall.
 d. %There are [Meg]'s notebooks at the back of the lecture hall.

To restate Jackendoff's observation in the terms used here, English has PD in existential clauses. (For further discussion, see Barker 2000 and Rawlins 2006.)

Although it appears not to have been noticed before, English also has PD in clauses with individual-level predicates. Consider the clauses in (7), in which an individual-level predicate has a subject that is a possessed DP. These clauses are well-formed exactly when the possessor of the subject is strong. For instance, the possessor can be a bare plural with a generic interpretation (7b), a DP headed by *every* (7c), or a proper name (7d), but it cannot be a DP headed by *sm* (7a).

- (7) a. *[Sm students]' parents are neurotic.
 b. [Students]' parents are neurotic. [= the generic student]
 c. [Every student]'s parents are neurotic.
 d. [Joe]'s parents are neurotic.

PD is thus quite general in English; it holds for both of Milsark's definiteness effects.⁴

⁴ As a reviewer observes, PD-like effects can also be observed in other English constructions that have been claimed to involve semantic scope or syntactic c-command. For instance, bound variable pronouns can be anteceded not only by subjects (as in *No girl_i thinks she_i will lose*) but also by possessors of subjects (as in *No girl_i's parents think she_i will lose*; see Reinhart, 1987; Barker, 1991). Negative polarity items can be anteceded not

These patterns raise the larger issue of how the strength or weakness of possessed DP's is determined more generally in natural language. Although it would be impossible to list all the imaginable scenarios, they certainly include the following.

On the one hand, it might be that all languages—or, at any rate, all languages with definiteness effects—calculate the strength or weakness of possessed DP's from the strength or weakness of their possessors. (This idea may be implicit in Baker 2006.) If so, PD would be universal.

On the other hand, it is conceivable that PD emerges only when certain design features are exhibited by the syntax and semantics of possession. Such characteristics must, obviously, be present in English, since English has PD. If we concentrate for the moment on 's-possessors in English (the so-called Saxon genitive), we can easily identify some candidates for the relevant design features.

'S-possessors are well known to be in complementary distribution with determiners, and have been treated semantically as determiners by Keenan and Stavi (1986). Since Abney (1987), 's-possessors have been assumed to occupy a high syntactic position within DP—the specifier of D. Further, it is often claimed that DP's with an 's-possessor in their specifier are understood as definite (for detailed discussion of this claim and a more nuanced view, see Peters and Westersthål 2006). Putting these observations together, we might speculate that a possessor determines the strength or weakness of the possessed DP only when one or more of the following conditions holds (but which one(s)?).

- (8) *Some conjectures concerning necessary conditions for PD*
 - a. The possessor and determiner are in complementary distribution;
 - b. The possessor is syntactically 'high' (e.g. in the specifier of D);
 - c. The possessed DP is interpreted as definite.

We might speculate further that when a possessor determines the strength or weakness of the possessed DP, it does so for the purposes of both of Milsark's definiteness effects. In other words, PD is not selective.

- (9) *A further conjecture*
When PD occurs, it holds across the board (i.e. for DE1 and DE2).

How plausible are these conjectures? We do not have to go far to encounter evidence that some of them cannot be right. In a discussion of English existentials and the semantics-pragmatics of determiners, Rawlins (2006) shows that the pivot can routinely be a relational

only by downward-entailing operators that are subjects (as in *No current student has ever been to Moscow*) but also by downward-entailing operators that are possessors of subjects (as in *No current student's parents have ever been to Moscow*; see Barker, 1991; Keenan, 1996).

DP headed by *the*, as long as the relational noun has a weak possessor introduced by the preposition *of* (see also Poesio 1994; Barker, to appear). The examples in (10) make the point that it is the strength or weakness of the *of*-possessor, not the determiner, that governs well-formedness here. In other words, this is another instance of PD.

- (10) a. There were the tops of [sm jam jars] on the counter.
 b. There were the tops of [jam jars] on the counter. [= at least two jam jars]
 c. *There were the tops of [most jam jars] on the counter.
 d. %There was the top of [the jam jar] on the counter.

Obviously, the possessor in these examples is not in complementary distribution with the determiner (*the*); nor is it located particularly high within DP, given that it is realized to the right of the relational noun. The fact that PD nonetheless occurs reveals that even in English, the necessary conditions for this phenomenon do not include (8a) or (8b). Similar sorts of evidence can be found in French; see Milner (1982) and, for some complications that arguably do not detract from the overall point, Flaux (1992, pp. 29-31; 1993, pp. 126-127).

It is not quite as straightforward to assess the other conjectures just presented—(8c), (9), and the speculation that PD might be universal. What is needed is evidence from a wider range of languages concerning the syntax and semantics of possessors and their interaction with Milsark's definiteness effects. With this goal in mind, I turn next to Maori and Chamorro.

3 SOME BACKGROUND AND A PREVIEW

The two languages to be investigated below, Maori and Chamorro, belong to different branches of the Austronesian family, which is one of the world's largest language families, both in terms of number of languages and the geographical area over which these languages are dispersed.

Despite this vastness, there are some morphosyntactic characteristics that recur throughout the family. Most Austronesian languages are head-initial and permit the predicates of clauses to be of any major category type. In many of the languages, the unmarked word order of clauses is predicate-initial (e.g. verb-initial); null arguments are possible; and the voice system is 'symmetric', meaning that there appears to be more than one pragmatically neutral voice.⁵ In Austronesian languages with determiners, the determiner typically precedes the noun, whereas the possessor typically follows. This word order makes it *a priori* unlikely that possessors and determiners would be in complementary distribution. (I will show later that possessors and determiners are not in complementary distribution in either Maori or Chamorro.) The languages are diverse in other respects; for instance, in their determiner

⁵ Because the voice system in e.g. Maori is 'symmetric', clauses that are structurally passive are often most naturally translated into active clauses in English.

systems, in the expression of quantification and negation, in the means by which grammatical relations are signaled, and in the form of their existential clauses.

Along all of these dimensions, Maori and Chamorro are typical Austronesian languages. Maori, a Polynesian language of New Zealand, is an endangered but extensively documented language that has been the focus of intense revitalization efforts since the early 1980's. Chamorro, a Western-Malayo-Polynesian language of the Mariana Islands, is an under-documented language with little written literature whose percentage of younger fluent speakers is rapidly declining.

Both languages have a predicate-initial word order not easily handled by the Principles and Parameters toolkit. Nonetheless, it can be shown that their clauses and DP's have essentially the same hierarchical syntactic organization as in more familiar languages. Readers will find it most convenient to assume 'standard' hierarchical clause structures for Maori and Chamorro and to suppose that precedence relations are determined post-syntactically (so that the left-to-right order of words in the examples is not syntactically significant). For an investigation of Chamorro clause structure that attempts to represent precedence relations in the syntax, see Chung (1998).

I show in the following sections that Maori and Chamorro exhibit both of Milsark's definiteness effects. Maori does not have PD at all; hence, PD is not universal. Chamorro does have PD, but only in clauses with individual-level predicates, not in existential clauses. This is evidence against the conjecture that when PD occurs, it holds across the board.

4 POSSESSORS AND DEFINITENESS EFFECTS IN MAORI

4.1 Basics

Maori is a head-initial, null argument language. Clauses are projected from a tense-aspect-mood category which occurs at the left. Then comes the predicate, which can be of any major category type, followed by the predicate's arguments and adjuncts. The word order of arguments and adjuncts following the predicate is flexible, but the unmarked word order is Predicate Subject Complements Adjuncts.⁶

⁶ Many of the Maori examples cited are from twentieth-century written sources, including grammars, pedagogical materials, a traditional history of the Tainui people (Jones & Biggs, 1995) and an English-Maori dictionary (Ngata, 1994). Examples not attributed to any source were generously provided by Te Haumihiata Mason, J. W. Milroy, T. S. Karetu, and Tamati Reedy, whose insightful engagement with the linguistic issues I gratefully acknowledge.

Examples are presented in the orthography of the original sources, except that long vowels are represented as vowels with a macron, not as double vowels. The following abbreviations are used: *aforem* 'aforementioned', *DO* 'direct object', *Ident* 'identificational', *Nmlz* 'nominalization', *Pass* 'passive', *Pers* 'personal article', *pl* 'plural', *Pred* 'predicate', *T* 'tense-aspect-mood'.

- (11) Ka hari-a atu te kōrero e Tū-whakahekeao ki a Maniapoto.
 T take-Pass away the news by Tū-whakahekeao to Pers Maniapoto
 ‘Tū-whakahekeao took the news to Maniapoto.’ (Jones & Biggs, 1995, p. 187
 [25.7])

Subjects (e.g. *te kōrero* ‘the news’ in (11)) are not accompanied by any special morphology; nonsubjects are generally realized as the complements of prepositions.

DP’s are projected from a determiner that occurs at the left. Because quantification in Maori is expressed outside the determiner system, there are few if any determiner quantifiers (see Bauer, 1997). Among the determiners are the definite article *te* (plural *ngā*) and various demonstratives, plus two indefinite articles, *tētahi* (plural *ētahi*) and *he*.

- (12) a. te kaumatua / he kaumatua
 the old.person a old.person
 ‘the elder / an elder’
 b. nga tangata / tētahi tangata
 the.pl men a man
 ‘the people / a person’

Exactly what the contrast is between the two indefinite articles has been the subject of lively debate. Elsewhere, William A. Ladusaw and I have proposed that *he* and *tētahi* signal different modes of semantic composition: *tētahi* signals that the property content of the indefinite is composed with the predicate by function application, whereas *he* signals that the property content of the indefinite is composed by the nonsaturating operation we call Restrict (see Chung and Ladusaw, 2004, henceforth C&L). Although our theory is not directly relevant here, four observations documented in C&L will prove useful below.

First, *tētahi* can occur immediately after a preposition, but *he* cannot (C&L, 28-30).

- (13) a. I haere ia ki tētahi kura i Ākarana.
 T go he to a school in Auckland
 ‘He went to a school in Auckland.’ (Waititi, 1969, p. 57)
 b. *Ka haere a Mere ki he whare.
 T go Pers Mere to a house
 (‘Mere went to a house.’)
 c. Tuhi-a rānei he kōrero mō tētahi purākau taniwha e mōhio ana koe.
 write-Pass or a story T.of a legend taniwha T know you
 ‘Or write a story about a taniwha legend that you know.’ (Karetu, 1974, p. 57)

Second, indefinites headed by either *he* or *tētahi* can serve as the subjects of episodic sentences (C&L, 31).

- (14) a. Tae noa mai he t̄angata.
 arrive freely to.here a people
 ‘Some people arrived.’ (Jones & Biggs, 1995, p. 81 [8.4])
 b. Ka tae mai tētahi taraka tino nui.
 T arrive to.here a truck very big
 ‘A huge truck came.’ (Waititi, 1969, p. 43)

Third, indefinites headed by either article can have narrow scope with respect to semantic operators. One such operator is sentential negation, which in Maori is typically expressed by a higher negative verb (C&L, 36-37). The negative verbs in (15) are *kāore* and *kore* (*tētehi* in (15b) is a dialectal form of *tētahi*).⁷

- (15) a. Kāore he tangata i āta-kite.
 T.not a person T clearly-see
 ‘No one actually saw it.’ (Jones & Biggs, 1995, p. 85 [8.10])
 b. Kore rawa tētehi o t-a-na ope i wehi.
 not at.all a of the-of-him war.party T afraid
 ‘None of his war party showed fear.’ (Jones & Biggs 1995, 285, p. [45.13])

Fourth and finally, as will be shown in a moment, *he* is sometimes weak, but *tētahi* is always strong.

4.2 Definiteness Effects

To show that a language exhibits Milsark’s definiteness effects, one must give a weak-strong classification of the language’s DP’s, and show that the pivots of existential clauses and the subjects of individual-level predicates respect that classification. I do this now for Maori.⁸

Consider (16), which gives a partial classification of Maori DP’s as weak or strong. The most noteworthy aspect of this classification is that the indefinites are split: DP’s headed by

⁷ However, only *tētahi* can have wide scope with respect to semantic operators; *he* cannot (see C&L, 33-41 for discussion).

⁸ Importantly, at this initial stage, the investigation need not involve any *a priori* commitment to an independent semantic characterization of weak and strong DP’s. Given how little is currently known about the empirical profile of definiteness effects across languages, this strikes me as appropriate.

tētahi are simply strong, whereas DP's headed by *he* are weak when interpreted existentially, but strong when interpreted generically.

(16) *A partial snapshot of weak and strong DP's in Maori*

WEAK	STRONG
<i>he</i> NP [existential]	<i>he</i> NP [generic]
	<i>tētahi</i> NP
	<i>te</i> NP
	pronouns
	proper names
	etc.

The classification claims that the pivots of existential clauses in Maori are headed by existential *he*, but not by any of the strong determiners. This is indeed so, although some syntactic complexity must be sorted through before the facts can emerge. Affirmative existential clauses in Maori consist simply of a pivot DP headed by existential *he*, which I analyze as the pivot of a null existential predicate. The construction occurs in its most minimal form in (17a), and accompanied by locative and temporal modifiers in (17b-c).⁹

- (17) a. He taniwha.
 a taniwha
 'There are taniwhas.' (Bauer, 1997, p. 34)
- b. He aitua i runga i te huarahi i te ata nei.
 an accident on top DO the road at the day this
 'There was an accident on the road this morning.' (Ngata, 1994, p. 3; entry for *accident*)
- c. He tuna no roto i nga awa.
 a eel T.of inside DO the.pl river
 'There were eels in the rivers.' (Jones & Biggs, 1995, p. 195 [27.3])

Negative existential clauses consist of a negative verb whose internal argument, the pivot, is a DP headed by existential *he*.

⁹ The claim that affirmative existential clauses have an (unpronounced) existential predicate makes them structurally parallel to negative existentials; see (18). Importantly, the predicate of these clauses is *not* the DP headed by *he*. Maori uses a special form of sentential negation (i.e. the negative verb *ēhara*) for clauses with DP predicates. For instance:

(i) Ehara a ia i te ākonga noa iho.
 T.not Pers she Pred learner freely down
 'She is no mean scholar.' (Ngata, 1994, p. 273; entry for *mean*)

Existential clauses do not employ this special form of negation, but instead use the negative verbs appropriate for predicates that are verbs or locative prepositional phrases (e.g. *kāore* and *kore*).

- (18) a. Kāore he wāhine o runga i t-ō rātau waka
 T.not a women of top DO the-of them canoe
 ‘There were no women on their canoe.’ (Pōtatau, 1991, p. 10)
- b. ānō kāore he kino i waenganui i a rātou.
 as.if T.not a bad in between DO Pers them
 ‘As if there were no quarrel between them.’ (Jones & Biggs, 1995, p. 285 [45.12])
- c. Kāore he take i tua atu i tēnā?
 T.not a reason at behind away DO that
 ‘Isn’t there any reason beyond that?’ (Karetu, 1974, p. 165)

Neither type of existential allows the pivot to be a DP headed by *tētahi*, *te*, or any other strong determiner. In affirmative existentials, this might conceivably be because the construction, for whatever reason, must exhibit *he* at its left edge (see e.g. Bauer, 1997, p. 34). The pattern is more revealing in negative existentials, given that these clauses display an overt (negative) verb that is clearly distinct from the pivot.

- (19) a. *Kāore tētahi take i tua atu i tēnā?
 T.not a reason at behind away DO that
 (‘Isn’t there any reason beyond that?’)
- b. *Kāore ētahi taniwha.
 T.not a.pl taniwha
 (‘There are no taniwhas.’)
- c. *Kāore t-a-ku mahi.
 T.not the-of-me work
 (‘I don’t have anything to do.’/‘There isn’t my work.’)

The classification in (16) claims further that individual-level predicates in Maori have strong DP’s as their subjects, but not DP’s headed by existential *he*. And indeed, the subjects of individual-level predicates can be chosen from the full range of strong DP’s, as the examples below are intended to suggest.

- (20) a. Kei te tika ano nga kupu.
 T correct exactly the.pl word
 ‘The words are exactly right.’ (Williams, 1971, p. 416)

- b. He pōhara ētahi kaumatua.
 Pred.a impecunious a.pl old.person
 ‘Some old people are impecunious.’ (Ngata, 1994, p. 217; entry for *impecunious*)
- c. Rite tonu koe ki te poaka ki te kai.
 similar quite you to the pig at the eat
 ‘You’re just like a pig at eating.’ (Waititi, 1962, p. 75)
- d. Ka mōhio-tia e Pita tētahi mahi toi.
 T know-Pass by Pita a practice art
 ‘Peter will know a craft.’

Subjects of individual-level predicates can also be headed by *he* in its generic interpretation.

- (21) a. Ka makariri he tangata.
 T cold a person
 ‘People (in general) get cold.’
- b. Ka moata he pahi, ki te reri mai koutou.
 T early a bus if ready to.here you.pl
 ‘Buses will be early, if you’re ready.’

But crucially, they cannot be headed by existential *he*.

- (22) a. *Ka tika he kōrero.
 T correct a story
 (‘A story is right.’)
- b. *I rite he rangatira rongonui ki a ia.
 T similar a chief famous to Pers him
 (‘A famous chief was like him.’)
- c. *Ka moata he pahi. Ka whakarere-a mātou.
 T early a bus T leave.behind-Pass we
 (‘A bus was early. We were left behind.’)
- d. *Ka mōhio-tia e Pita he mahi toi.
 T know-Pass by Pita a practice art
 (‘Pita will know a craft.’)

(Some of the examples above make the point that many English predicates that are stage-level have Maori counterparts that pattern as individual-level; see C&L, 57-58.)

Maori, in short, exhibits both of Milsark’s definiteness effects. Let us turn next to the syntax of possession and to the issue of whether Maori has PD.

4.3 The syntax of possession

Possessors in Maori are realized as complements of the prepositions *a* or *o*. The choice of *a* or *o* is determined by the possessor's semantic relation to the possessed: when the possessor dominates or is in control of the possessed, *a* is chosen; otherwise, *o* is chosen (Bauer, 1997, pp. 390-391). In the unmarked word order, the possessor PP occurs immediately after the possessed N.

- (23) a. te waiata [a Horomona]
 the song of Solomon
 'Solomon's song' (Biggs, 1969, p. 46)
 b. taua whaea [ō-na]
 the.aforem mother of-him
 'that mother of his' (Bauer, 1997, p. 406)

However, given the right choice of determiner, the possessor PP can instead occur to the left of N, in which case the preposition *a* or *o* fuses phonologically with the determiner.¹⁰ This option is preferred when the possessor is pronominal but possible more generally, as long as the possessor is not too complex (see Bauer, 1997, pp. 404-405).

- (24) a. t-ā Horomona waiata
 the-of Solomon song
 'Solomon's song' (Biggs, 1969, p. 46)
 b. ō-na whakaaro
 of-him thought
 'his beliefs' (Ngata, 1994, p. 356; entry for *private*)

The word order in (24) provides one indication that possessor PP's are merged higher than other PP's within the structure of DP. Although complements and adjuncts to N in Maori are also realized as PP's, none of these other PP's can occur to the left of N. Taking these precedence relations to be revealing of hierarchical structure, I will assume that possessor PP's are merged as the specifier of some head below D—perhaps N—and that this word order is reflected transparently in (24). The analysis of the N-initial word order in (23) then poses essentially the same syntactic challenge as the analysis of Maori's verb-initial clauses (see (11) and, for further discussion, Bauer, 1997 and Chung, 1998, pp. 170-172).

¹⁰ The word order shown in (24) is allowed only when the determiner is the definite article *or*, I claim, the indefinite article *he*. Its morpho-phonological consequences include the following: (i) The vowel of the preposition lengthens. (ii) When the determiner is definite singular, the fused complex of determiner plus preposition begins with *t*; otherwise, the determiner is not pronounced.

Observe, finally, that in examples like (23), the possessor is not in complementary distribution with the determiner. Just as important, the possessor and the determiner can co-vary freely: it is possible for an indefinite possessed DP to have a definite possessor (see (25b-c)), and vice versa (25d).

- (25) a. nga wā [o te pakanga]
 the.pl time of the war
 ‘the times of war’ (Ngata, 1994, p. 11; entry for *ally*)
- b. tētahi wāhi [o te whenua]
 a part of the land
 ‘a part of the land’ (Ngata, 1994, p. 17; entry for *appropriate*)
- c. he kōpaka [o te kai]
 a shortage of the food
 ‘a shortage of food’ (Ngata, 1994, p. 426; entry for *shortage*)
- d. nga kupu [o tētahi waiata]
 the.pl word of a song
 ‘the words of a song’ (Karetu, 1974, p. 76)

The only systematic gap in this pattern of co-variation involves the indefinite article *he*. Because possessors are realized as complements of prepositions, but *he* cannot occur immediately after a preposition (see (13)), it is impossible for a possessor in Maori to be a *he*-indefinite.

4.4 Possessor dominance

We are now ready to ask whether Maori has PD. The issue is whether, for the purposes of Milsark’s definiteness effects, a weak possessor can cause a possessed DP to count as weak, or a strong possessor can cause a possessed DP to count as strong. Now, because Maori has no possessors that are *he*-indefinites, and therefore no weak possessors at all, we can perform the experiment only for possessors that are strong. Nonetheless, the results of this half of the experiment are revealing.

A strong possessor cannot prevent a possessed DP from serving as the pivot of an existential clause. Consider the existential clauses in (26-27), which illustrate one common way of expressing existential ‘have’ in Maori. If the strength of the possessor dictated the strength of the entire possessed DP, all of these clauses should be ungrammatical, because all of them have a pivot whose possessor is strong. What actually happens is that the strength or weakness of the pivot is determined in the usual way, by the content of D. Pivots headed by existential *he* count as weak.

- (26) a. He mana tipua [o Māui].
 a power abnormal of Māui
 ‘Māui possessed abnormal powers (lit. There were abnormal powers of Māui).’
 (Ngata, 1994, p. 1; entry for *abnormal*)
- b. Kaore he reo [o te kararehe].
 T.not a language of the animal
 ‘Animals lack speech (lit. There is no speech of animals).’ (Ngata, 1994, p. 443; entry for *speech*)
- c. I tenei ra, kaore he hara [o tenei tangata].
 on this day T.not a sin of this man
 ‘On this day, this man is blameless.’ (Waititi, 1969, p. 74)
- d. Kaore kē he tamaiti ake [a Te Puea].
 T.not instead a child own of Te Puea
 ‘Te Puea had no child of her own.’

Pivots headed by *tētahi* and other strong determiners count as strong.

- (27) *Kaore kē tētahi tamaiti ake [a Te Puea].
 T.not instead a child own of Te Puea.
 (‘Te Puea had no child of her own.’)

Further, a strong possessor cannot ‘empower’ a possessed DP to serve as the subject of an individual-level predicate. In the clauses in (28-29), the subject of an individual-level predicate has a strong possessor. If the strength of the possessor dictated the strength of the entire subject, all of these clauses should be grammatical. Instead, the strength or weakness of the subject is determined once again by the content of D. Subjects headed by existential *he* count as weak.

- (28) *Ko Kawiti he tino rangatira [o Ngā Puhi].
 Ident Kawiti a very chief of Ngā Puhi
 (‘A true chief of Ngā Puhi was Kawiti.’)

Subjects headed by strong determiners, such as *tētahi*, count as strong.

- (29) a. Ko Kawiti tētahi [o ngā tino rangatira [o Ngā Puhi]].
 Ident Kawiti a of the.pl very chief of Ngā Puhi
 ‘One of the true chiefs of Ngā Puhi was Kawiti.’ (NTTR, 32)

- b. He whakamatemate anō tētahi taha [o te āhua tangata].
 Pred.a curious again a side of the character person
 ‘A part of human nature is curiosity.’ (Ngata, 1994, p. 211; entry for *human nature*)
- c. He tōnui ētahi wāhi o Te Tairāwhiti mo te kaimoana.
 Pred.a prolific a.pl part of the East.Coast for the sea.food
 ‘Some parts of the East Coast are prolific in sea food.’ (Ngata, 1994, p. 359; entry for *prolific*)

The conclusion seems clear that Maori does not have PD. This in turn suggests that PD is not universal.

A natural question to raise at this point is whether the absence of PD in Maori might be connected to any other properties of the language. If PD were to emerge only when possessed DP’s are interpreted as definite (see (8c)), we might be able to attribute the absence of PD in (28) to the fact that it is impossible to give a definite construal to a DP headed by *he*. It is not clear to me at present how to explore this possible connection further in Maori. But because the issue also arises, ultimately, in Chamorro, let me turn to that language next.

5 POSSESSORS AND DEFINITENESS EFFECTS IN CHAMORRO

5.1 Basics

Like Maori, Chamorro is a head-initial, null argument language. Clauses are projected from a tense-aspect-mood category which occurs at the left, but is often unrealized. This category is followed by the predicate, which can be of any major category type, and then by the predicate’s arguments and adjuncts. Although the relative order of arguments and adjuncts is flexible, the unmarked word order of clauses containing verbs is Verb Subject Complements Adjuncts.¹¹

¹¹ Most of the Chamorro examples cited were generously provided by Manuel F. Borja, Maria T. Quinata, and others acknowledged in Chung (1998). I owe a continuing debt to these speakers for their insights, help, and friendship. Other examples cited are from oral narratives collected by Cooreman (1982, 1983), news articles, or stories and essays (Borja, Borja & Chung, 2006).

All Chamorro examples are cited in the orthography used in Chung (1998). The following abbreviations are used: agr ‘agreement’, AP ‘antipassive’, Comp ‘complementizer’, Imperf ‘imperfect’, L ‘linker’, Loc ‘locative morphological case’, nom ‘nominative’, obj ‘objective’, Obl ‘oblique morphological case’, Prog ‘progressive’, Q ‘question’, WH ‘Wh-Agreement’. Note that infixes are italicized.

- (30) Ha-po'lu tä'lu tattı si nana-hu i lata gi päpa' i hägu-n galak.
 agr-put again back mother-agr the can Loc under.L the leaf-L galak
 'My mother put the can back again under the *galak* leaf.' (Borja, Borja & Chung, 2006, p. 98)

Unlike Maori, Chamorro has a fair amount of inflectional morphology, including case marking, subject-verb agreement, and possessor-noun agreement. Both subjects and direct objects appear in the unmarked morphological case. Other arguments appear in the oblique or locative morphological cases, or are realized as complements of prepositions (see Chung, 1998).

DP's are projected from a determiner that occurs at the left. Among the determiners are the definite article *i*, the null indefinite article, the indefinite article *un*, and various quantifiers, including *käda* 'each', *todu* 'all', *meggai* 'many', and *bula* 'much, many'.

- (31) a. i gima' / guma' / un guma'
 the house house a house
 'the house / a(ny) house / a house'
 b. käda palao'an / meggai na famalao'an
 each woman many L women
 'each woman / many women'

The contrast between Chamorro's null indefinite article and the indefinite article *un* is different from what we saw earlier for Maori's two indefinite articles. The null indefinite article is the Chamorro counterpart of Maori *he*: it signals that the property content of the indefinite is composed by Restrict. But Chamorro *un*—like English *a*—signals nothing at all about how the property content of the indefinite is composed. As a result, *un* and the null indefinite article pattern alike in many respects, but not all.

First, indefinites headed either by the null indefinite article or by *un* can serve as subjects of episodic sentences.

- (32) a. Änai ma-bäba, humuyung patgun.
 when agr-open agr.out child
 'When they opened it, a child emerged.' (Cooreman, 1983, p. 107)
 b. Mímilalak ginin i kánnat un balutan magagu.
 agr.float.Prog from the channel a bundle.L clothes
 'A bundle of clothes came floating from the channel.' (Cooreman, 1983, p. 107)

Second, indefinites headed by either article can have narrow scope with respect to quantifiers and other semantic operators.¹²

- (33) a. Kāda taotao ginin gumaigi gi otru guma'.
 each person Imperf agr.be.at Loc other house
 'Each man was in a different house.'
- b. Kāda taotao ginin gumaigi gi un difirentis na guma'.
 each person Imperf agr.be.at Loc a different L house
 'Each man was in a different house.'

Third, as will be shown immediately, the null indefinite article is always weak, whereas *un* is sometimes strong.

5.2 Definiteness effects

In the chart in (34), I give a partial classification of Chamorro DP's as weak or strong. Notice that the indefinites are split: DP's headed by the null indefinite article are simply weak, whereas DP's headed by *un* have both weak and strong interpretations. (It remains to be determined whether DP's headed by the quantifiers *meggai* 'many' and *bula* 'much, many' have strong as well as weak interpretations; the obscuring factor is discussed later in this section.)

(34) *A partial snapshot of weak and strong DP's in Chamorro*

WEAK	STRONG
∅ NP	
<i>meggai</i> NP	
<i>bula</i> NP	
<i>un</i> NP ['a, one']	<i>un</i> NP ['one']
etc.	<i>kāda</i> NP
	<i>todu</i> NP
	<i>i</i> NP
	pronouns
	proper names
	etc.

¹² One complication that is irrelevant here: *un* is an affirmative polarity item (see C&L, 100-103), so it cannot have narrow scope with respect to sentential negation.

This classification can be seen at work in the expected way in existential clauses and clauses with individual-level predicates. In existential clauses, the pivot must be weak. It can, for instance, be a DP headed by the null indefinite article (see (35a) and (35d)) or by any other weak determiner (35b-c), but it cannot be a DP headed by *käda* ‘each’, *todu* ‘every, all’ (35e), or the definite article *i* (35d).¹³

- (35) a. Guäha hotnu na hotnu-n antigu.
agr-exist oven L oven-L ancient
‘There was an oven that was a traditional oven.’ (*I Dibota*, 4)
- b. Guäha un peskadót na’an-ña si Orasima’.
agr.exist a fisherman name-agr Orasima
‘There was a fisherman whose name was Orasima.’
- c. Taya’ dos pat tres simana disdi ki um-ätungu’.
agr.not.exist two or three week since agr-know.each.other
‘There weren’t (even) two or three weeks since they got to know each other.’
(Cooreman, 1982, p. 7)
- d. Guäha (*i) góf-bunita na palao’an gi kläs-hu.
agr.exist the very-pretty L woman Loc class-agr
‘There is a/*the most beautiful woman in my class.’
- e. *Guäha todu man-malangu.
agr.exist all WH[nom].agr-sick
(‘There was everyone who was sick.’)

In clauses with individual-level predicates, the subject must be strong. It can, for instance, be a definite DP headed by *i* (36a-b) or an indefinite headed by *un* (36c), but it cannot be an indefinite headed by the null indefinite article (see (36d-g)).

- (36) a. Kao chächaflek? Ti ha-tungu’ i asagua-hu.
Q agr.quiver.Prog not agr-know the spouse-agr
‘Was she dying? My wife didn’t know.’ (Cooreman, 1983, p. 180)
- b. Man-dángkulu i näpu.
agr-big the wave
‘The waves were big.’
- c. Mu-mäguf un patgon-ña si Julia.
agr-happy one child-agr Julia
‘One child of Julia’s was happy.’

¹³ Very occasionally, I have come across examples in narrative discourse in which the pivot is a definite DP headed by *i* or the demonstrative *ädyu* ‘that (near third person)’. However, these constructions are far less frequent than their English counterparts, and they are firmly rejected by speakers in elicitation.

- d. Ha-tungu' hit *(i) ma'estra.
agr-know us the teacher
'The/*A teacher knows us.'
- e. *Mu-mäguf patgun.
agr-happy child
('A child was happy. ')
- f. Á'paka' *(i) floris.
agr.white the flower
'The/*A flower is white.'
- g. Hayu *(i) siya.
wood the chair
'The/*A chair is wood.'

Chamorro, in other words, exhibits both of Milsark's definiteness effects.

Perhaps less expected is the fact that in addition to DE1 and DE2, Chamorro has a third, language-particular definiteness effect. To see this, notice first that when the subject of an individual-level predicate is realized inside the clause, to the right of the predicate, it cannot be headed by a quantifier, where the quantifiers include the strong determiners *käda* 'each' and *todu* 'every, all' as well as the weak determiners *meggai* 'many' and *bula* 'much, many'.¹⁴ Over and above DE2, that is, Chamorro demands that when the subject of an individual-level predicate is realized to the right of the predicate, it must specify a referential argument, and in this sense must be specific (Chung, 1998, pp. 111-115).¹⁵ This requirement, which is evaded by subjects that have been topicalized (see 7.3) or displaced by wh-movement, is illustrated below.

- (37) a. *Ha-tungu' meggai na taotao si tata-hu.
agr-know many L people father-agr
('Many people know my father. ')
- b. *Che'lu-n Carmen käda lahi gi kuattu.
sibling-L Carmen each boy Loc room
('Each boy in the room is a brother of Carmen's. ')

¹⁴ The subject can be realized at the right edge of the clause, in what I take to be the (right) specifier of Infl, or else lowered to right-adjoin to any projection of a verbal or adjectival predicate (Chung, 1998). One could think of the subject as *in situ* whenever it follows the predicate, as long as *in situ* is understood to encompass all the syntactic positions just described.

¹⁵ The DP's that count as specific for the purposes of this restriction are: pronouns, proper names, DP's headed by the definite article *i* or by a demonstrative, and indefinite noun phrases headed by the indefinite *un*, a numeral, or *pälu* '(contrastive) some'. In addition, some speakers permit DP's headed by *todu* 'all' to count as specific, but only when cross-referenced by plural agreement; a smaller number of speakers permit DP's headed by *käda* 'each' to count as specific, but only when cross-referenced by plural agreement (see Chung, 1998, pp. 113-114). I assume that in such cases, what counts as specific is not the entire quantified DP, but rather the (plural) set that supplies its restriction.

Importantly, the patterns illustrated in (36-37) are not limited to individual-level predicates, but also hold for all transitive and unergative predicates in the language. Following Kratzer (1994), Chomsky (1995), and others, let us assume that verbs that are transitive or unergative have a subject that originates in the specifier of the abstract verbal head *v* and then raises to the specifier of Infl (henceforth, an *external argument*). In Chamorro, when an external argument is realized to the right of the predicate, it must be strong (= chosen from the right-hand column of (34)). It can be headed by the definite article *i*, for instance, but not by the null indefinite article.

- (38) a. Ha-akka' yu' *(i) ga'lagu.
agr-bite me the dog
'The/*A dog bit me.'
- b. Ginin ha-istótotha yu' *(i) díkiki' na patgun.
Imperf agr-disturb.Prog me the little L child
'The/*A little child was disturbing me.'
- c. Mañ-áchalik *(i) lalahi.
agr-laugh.Prog the boys
'The boys/*Boys were laughing.'

Moreover, when an external argument is realized to the right of the predicate, it cannot be headed by a quantifier.

- (39) a. *Hafa ha-tätaitai káda patgun?
what? WH[obj].agr-read.Prog each child
(‘What was each child reading?’)
- b. *Mañ-écheffa bula famagu'un gi sanhiyung.
agr-whistle.Prog many children Loc outside
(‘Many children are whistling outside.’)

In contrast, passive and unaccusative predicates have subjects which are not external arguments, and which can be headed by the full range of determiners in the language. For instance, the derived subject of a passive can be headed by the null indefinite article (see (40a)) or by a quantifier (40b), even when it is realized within the clause, to the predicate's right. So can the subject of an unaccusative predicate (40c-e).

- (40) a. Ma-hatsa dánkulu-n mákina pära i tupu.
agr.Pass-build big-L machine for the sugar.cane
'A big machine was built for the sugar cane.' (Cooreman, 1983, p. 36)

- b. Ma-na'sinmagagu kăda patgun.
agr.Pass-make.be.without.clothes each child
'Each child was made to undress.'
- c. Kumahulu' dăngkulu na hăggan.
agr.rise.up big L turtle
'A large turtle rose up.'
- d. Ānai man-mattu todū siha i man-găi-asagua.
when agr-arrive all Pl the WH[nom].agr-have-spouse
'When all those who had wives came.' (Cooreman, 1983, p. 65)
- e. Lao ti apmam man-mattu meggai hasuli yan tilapia.
but not long agr-arrive many eel and fish.species
'But not long afterwards, many eels and freshwater fish arrived.' (*Pito Nganga*, 11)

These patterns led me to propose in earlier work that Chamorro has yet another definiteness effect, which I called the External Argument Restriction (EXAR; see Chung, 1998, pp. 100-107). Taking the predicate to mark the left edge of the clause, I state this effect, which is highly reminiscent of DE2, as follows.

(41) *A Chamorro-particular definiteness effect*

DE3: An external argument that is realized inside the clause must be both strong and specific.

Some hard questions arise at this point. What precisely is the theoretical notion of specificity that is relevant to DE3? Are there any Chamorro DP's that are weak but nonetheless count as specific for the purposes of DE3? And if not, might it be that DE3 is not really separate from DE2, but simply represents the way that DE2 happens to be instantiated in Chamorro?

It lies beyond the scope of this study to account for the specificity at play in DE3 (though see Chung, 1998 for a few more details). Accordingly, the discussion below largely ignores the half of DE3 that demands that external arguments must be specific. I will, however, be able to show that Chamorro draws a distinction between DE2 and the other half of DE3, which demands that external arguments must be strong. I will therefore continue to maintain that these two definiteness effects are separate, and that DE2 is (potentially) universal whereas DE3 is Chamorro-particular.¹⁶ The reasons for adopting this stance will become apparent shortly.

¹⁶ As it happens, Maori also has a language-particular definiteness effect similar to DE3 (see Chung, Mason and Milroy, 1995 and C&L for discussion). This effect is not discussed in the text, because it contributes nothing to the understanding of (the absence of) PD in Maori.

Now, on to the syntax of possession.

5.3 The syntax of possession

Possessed DP's in Chamorro contain not only a determiner at the left, but a possessor at the right. The possessor, which appears in the unmarked morphological case, either triggers possessor-noun agreement on the possessed N (see (42a)) or else is 'joined' to N via the inflectional morphology known in Austronesian linguistics as the linker (42b).

- (42) a. *i nana-ña [i neni]*
 the mother-agr the baby
 'the mother of the baby'
- b. *i nana-n [i neni]*
 the mother-L the baby
 'the mother of the baby'

Generally speaking, the syntactic categories in Chamorro that trigger morphological agreement come to occupy specifiers that are syntactically 'high' (Chung, 1998). The subject, which triggers subject-verb agreement on verbal or adjectival predicates, is lodged in the highest specifier of the clause, which I take to be the specifier of Infl. Phrases displaced by *wh*-movement, which trigger *Wh*-Agreement, are lodged at the left periphery, in what I take to be the specifier of *C*. The fact that possessors too trigger morphological agreement argues that they too come to occupy a specifier that is syntactically 'high'—presumably, the specifier of *D*.

Finally, in Chamorro much as in Maori, the possessor and the determiner of a possessed DP coexist and can covary freely. The covariation is, in fact, freer in Chamorro than in Maori. Although possessors in Chamorro are typically strong and specific (i.e. not headed by quantifiers), this is a tendency rather than an absolute requirement. Compare the strong, specific possessors in (43a-d) with the weak possessors in (43e-g).

- (43) a. *i familiä-nña [esti as Mrs Johnston]*
 the family-agr this Obl Mrs Johnston
 'the family of this Mrs Johnston' (Cooreman, 1982, p. 19-20)
- b. *pao-ña [i sädduk]*
 smell-agr the river
 'a(ny) odor of the river'

- c. dos haga-ña [pro] yan unu lahi-ña [pro]
two daughter-agr and one son-agr
'two daughters of his and one son of his' (Cooreman, 1982, p. 8)
- d. kăda saina-n [i famalao'an siha]
each parent-L the women pl
'each parent of the girls'
- e. taotao [otru tanu']
person.L other land
'a person of another country' (*Marianas Variety*, 4/15/83)
- f. i gapitulu-n [patgon-ña [pro]]
the hair-L child-agr
'the hair of her child (lit. of a child of hers)'
- g. che'lu-n [tata-ña [si nana-hu [pro]]]
sibling-L father-agr mother-agr
'brother of my mother's father (lit. of a father of my mother)' (Borja, Borja & Chung, 2006, p. 100)

To be sure, some examples of possessed DP's with weak possessors can also be analyzed as constructions that do not involve possession at all. (43e), for instance, has an alternative analysis as a complex NP in which the head N *taotao* 'person' has a NP modifier *otru tanu* 'other country' (compare English compounds of the sort [*foreign visitor*] *status*). But other examples of weak possessors are not susceptible to this sort of reanalysis. In (43f), the possessor *patgonña* 'her child' is clearly a DP headed by the null indefinite article, not an NP modifier, because it itself contains a possessor—the null pronoun that triggers possessor-noun agreement on *patgun* 'child'. (The location of this morphological agreement reveals that the possessor here is associated with *patgun*, not with the higher N *gapitulu* 'hair'.) Similarly, in (43g), the possessor *tataña si nanahu* 'my mother's father' is a DP headed by the null indefinite article, not an NP modifier, because it itself contains a possessor—the possessed DP *si nanahu* 'my mother'. In short, it is quite clear—and crucial for current purposes—that possessors in Chamorro can be headed by weak or strong determiners.¹⁷

5.4 Possessor dominance

With this information in hand, let us raise the issue of whether Chamorro exhibits PD. The answer is yes, but with a difference: the definiteness effects that we have been examining diverge.

¹⁷ Readers who are concerned that in (43g), the possessor *tataña si nanahu* 'my mother's father' seems to have a unique referent should see sections 5.4 and 6.

In broad outline, the situation is this. Chamorro does not have PD for the purposes of DE1 or DE3. But the language *does* have PD for the purposes of DE2. Further, because of the confounding factor that transitive individual-level predicates must also conform to DE3, this version of PD emerges only for individual-level predicates that are *intransitive*. Schematically:

DEFINITENESS EFFECT	PREDICATE TYPE AFFECTED	PD?
DE1	existential	no
DE2	individual-level [intransitive]	yes
DE3	transitive / unergative	no

The details, which are rather intricate, are laid out in what follows.

As far as DE1 is concerned, Chamorro does not have PD. A strong possessor does not prevent a possessed DP whose determiner is weak from serving as the pivot of an existential clause. Consider

- (44) a. Guäha da'magas-ña [i ayuyu].
agr.exist claw-agr the coconut.crab
'The coconut crab has a claw (lit. there is a claw of the coconut crab).'
- b. I taotao mo'na guäha tanu'-ñiha [*pro*] yan lugat-ñiha [*pro*].
the person first agr.exist land-agr and place-agr
'The first men have their lands and places (lit. The first men, there are lands and places of theirs).' (Cooreman, 1982, p. 1)
- c. Guäha famagu'un-ñiha [käda taotao gi kuattu].
agr.exist children-agr each person Loc room
'Every person in the room has children.'
- d. Taya' kareta-ña si Antonio.
agr.not.exist car-agr Antonio
'Antonio doesn't have a car.'
- e. Yänggin esta taya' salappe'-ña [i taotao].
if already agr.not.exist money-agr the person
'If the person has no more money.' (Borja, Borja & Chung, 2006, p. 127)

Nor can a weak possessor enable a possessed DP whose determiner is strong to serve as the pivot of an existential clause. Importantly, this holds true even when the strong determiner is the definite article *i*, as (45) shows.

- (45) a. *Guäha i da'magas-ña [un ayuyu].
agr.exist the claw-agr a coconut.crab
(‘There is the claw of a coconut crab.’)

- b. Guäha (*i) kustumbre-nña [un patgun] sén-maolik.
 agr.exist the habit-agr a child WH[nom].agr.very-good
 ‘There is (*the) character of one child that is very good.’

The ungrammaticality of Chamorro examples of this type offers a striking contrast with the English examples seen earlier in (10).

Further, Chamorro does not have PD for the purposes of the Chamorro-particular DE3. When an external argument that is a possessed DP is realized inside the clause, its strength or weakness is determined by the content of D, not by the strength or weakness of the possessor. Consider the clauses in (46), in which the external argument is a possessed DP whose possessor is strong. These clauses are grammatical when the possessed DP is headed by the definite article *i*, but not when it is headed by the null indefinite article.

- (46) a. Ha-ispanta *i* famagu’un *(i) kätu-n [Dolores].
 agr-frighten the children the cat-L Dolores
 ‘The/*A cat of Dolores’ frightened the children.’
 b. *Ha-na’ma’a’ñaoyu’ taklalo’-mu [*pro*].
 agr-make.afraid me anger-agr
 (‘Anger of yours frightens me.’)
 c. Kumékuentus ?*(i) atungu’-ñiha [*i* famalao’an].
 agr.speak.Prog the friend-agr the women
 ‘The/?*A friend of the girls was speaking.’

Similarly, when the subject of a *transitive* individual-level predicate is a possessed DP, its strength or weakness is determined by the content of D, not by the strength or weakness of the possessor. Consider (47), in which the subject of such a predicate has a possessor that is strong. Here too, the outcome is well-formed when the possessed DP is headed by the definite article *i*, but not when it is headed by the null indefinite article.

- (47) a. Ha-sén-agradesi hit *(i) nana-n [*i* famagu’un].
 agr-very-appreciate us the mother-L the children
 ‘The/*A mother of the children appreciates us.’
 b. Ha-tungu’ *i* ansa *(i) ma’estra-n [*i* famagu’un [Jose]].
 agr-know the answer the teacher-L the children Jose
 ‘The/*A teacher of Jose’s children knows the answer.’

This makes sense: given that Chamorro’s transitive individual-level predicates are transitive verbs, their external arguments must conform to DE3, and as far as DE3 is concerned, there is no PD.

The fact that Chamorro lacks PD for these definiteness effects might seem little different from what was shown earlier for Maori. However, the surprise is that Chamorro *does* have PD for the purposes of DE2. As promised, this phenomenon emerges in exactly one circumstance: when the individual-level predicate is *intransitive*.

To get a feel for this version of PD, consider the clauses in (48-49). Here, the individual-level predicate is intransitive and the subject is a possessed DP headed by the null indefinite article. The point of interest is that despite this weak determiner, the subject DP counts as strong because its possessor is strong—a null pronoun in (48a-b), a proper name in (48c-f), or a DP headed by a strong determiner in (48g-j).

- (48) a. Dáŋkulu kapiya-ña [*pro*] giya Tumon.
agr.big chapel-agr Loc Tumon
'His chapel (lit. a chapel of his) at Tumon is big.' (Cooreman, 1982, p. 45)
- b. Hafa na mämpus amariyu kulot-mu [*pro*]?
what? Comp so agr.yellow color-agr
'Why is your color (lit. color of yours) so yellow?' (Borja, Borja & Chung 2006, p. 81)
- c. Kohu adeng-ña [*si* Tun Pedro].
agr.lame leg-agr Tun Pedro
'Tun Pedro has a lame leg.'
- d. Chamoru amigu-ña [*si* Julia].
Chamorro friend-agr Julia
'A friend of Julia's is Chamorro.'
- e. Tres años esta tiempo-ña [*si* Joaquin] giya Hawaii.
three years already time-agr Joaquin Loc Hawaii
'Joaquin had already spent three years in Hawaii (lit. time of Joaquin's in Hawaii was three years).' (Cooreman, 1983, p. 30)
- f. Á'paka' chinina-ña [*si* Carmen].
agr.white shirt-agr Carmen
'Carmen's shirt is white.'
- g. Sa' ti parehu gramatika-nñiha [*i* dos].
because not agr.similar grammar-agr the two
'Because (the) grammars of the two (languages) are not similar.' (Borja, Borja & Chung, 2006, p. 119)
- h. An nuebu kareta-ña [*esti i* taotao], sessu malägu' na u-fam-a'nu'i
if agr.new car-agr this the person often agr.want Comp agr-AP-show
gi pumälu.
Loc other
'If a man has a new car, he usually wants to show it to others.'

- i. Maolek kustumbre-nña [un patgun].
agr.good habit-agr one child
'One child has a good character (but most of the others do not).'
- j. Hayu guma'-ña [i nana-n [Maria]].
wood house-agr the mother-L Maria
'Maria's mother's house (lit. a house of Maria's mother) is wood.'

Especially noteworthy are the clauses in (49), in which the subject is a possessed DP whose possessor is itself a possessed DP. Despite the fact that each possessed DP is headed by the null indefinite article, the entire subject counts as strong, because the most deeply embedded possessor is strong.

- (49) a. Átilung gapitulu-n [amigu-n [Jose]].
agr.black hair-L friend-L Jose
'Jose's friend's hair (lit. hair of a friend of Jose's) is black.'
- b. Kalaktus päpakis [kätu-n [i famagu'un]].
agr.sharp claw.L cat-L the children
'The children's cat's claws (lit. claws of a cat of the children) are sharp.'

In other words, the PD phenomenon in Chamorro is recursive. (PD in English is likewise recursive; consider examples such as *There was [[someone's] daughter's] umbrella on the porch* and *[[Every linguist's] children's] friends are intelligent*.)

At this point, it is important to pause and consider whether some aspect of possession besides the strength of the possessor might contribute to the grammaticality of (48-49). One might wonder whether the particular subtype of possession is relevant—and indeed, in clauses with PD, the possessed noun is often inalienably possessed (see e.g. (48b, c, g, i)). But closer examination reveals that inalienable possession is not required: the possessed noun can also be a relational noun (48d) or can involve some completely different sort of possession (see e.g. (48a, e, f, h, j)).

One might also wonder whether the interpretation of the possessed noun matters; specifically, whether uniqueness is involved. In clauses with PD, it often happens that the referent of the possessed DP is unique or maximal (see e.g. (48b) and (48g)). If possessed DP's headed by the null indefinite article invariably had referents that were unique, and if DP's with unique referents were always strong, the examples in (48) would straightforwardly satisfy DE2, and PD would be epiphenomenal. However, it is a fact that in Chamorro, possessed DP's headed by the null indefinite article need not have referents that are unique. In some instances, a possessed DP headed by the null indefinite article clearly has a non-unique referent: for instance, (48c) is consistent with Tun Pedro's having one lame leg and one healthy leg; (48d) is consistent with Julia's having friends who are not Chamorro; (48f) is consistent with Carmen's

having shirts that are not white (as long as she is wearing a white shirt); and so on. In other instances, a possessed DP headed by the null indefinite article cannot have a unique referent, because it has no referent at all; see the negative existential sentences (44d-e). Finally, possessed DP's headed by the null indefinite article cannot invariably be strong, given that they do not count as strong for the purposes of DE3 (recall (46-47)). There is doubtless more to say about the issue of uniqueness in some of these examples. But for the moment, what matters is that in general, the possessed DP's in (48) count as strong not because of any uniqueness, but because their possessors are strong.

To recapitulate, Chamorro has PD for the purposes of just one definiteness effect—DE2. The contrast between DE2 and the highly similar DE3 makes this especially clear. If DE2 and DE3 really were 'the same effect' in Chamorro, one would expect examples like (48), on the one hand, and (46), on the other, to uniformly manifest, or fail to manifest, PD. The fact that PD occurs in (48), but not in (46c), provides a straightforward argument that these two effects cannot be collapsed.¹⁸

Further, the Chamorro version of PD emerges only for individual-level predicates that are *intransitive*. This limitation can be traced to a confounding factor: individual-level predicates that are transitive must also conform to DE3, and there is no PD for DE3. I will return later to this idea, in section 7.4. Meanwhile, in the interests of full disclosure, it may help for me to bring together all the patterns involving DE2 and DE3 that have been presented up to this point.

The two charts in (50) summarize how these definiteness effects play out for the various types of Chamorro clauses. In each chart, the cells represent particular combinations of subject and predicate, which are identified as grammatical (✓) or ungrammatical (*); in key cases, examples are cited. The columns correspond to types of subjects, e.g. unpossessed subjects with a weak D; the rows correspond to types of predicates, e.g. intransitive individual-level predicates.

(50) a. *A snapshot of the impact of DE2*

PREDICATE	SUBJECT		
		WEAK <i>D</i> AND NO POSSESSOR	WEAK <i>D</i> AND STRONG POSSESSOR
INTRANS INDIVIDUAL-LEVEL	✓	* (36e-g)	✓ (48-49)
TRANS INDIVIDUAL-LEVEL	✓	–see below–	–see below–

¹⁸ Speakers do not find examples like (46c) to be as thoroughly ungrammatical as their transitive counterparts (46a-b). I have no explanation for this.

b. *A snapshot of the impact of DE3*

PREDICATE	SUBJECT		
		WEAK <i>D</i> AND <i>STRONG D</i>	WEAK <i>D</i> AND <i>STRONG POSSESSOR</i>
<i>W EXTERNAL ARGUMENT</i>	✓	* (38, 36d)	* (46-47)
<i>W/O EXTERNAL ARGUMENT</i>	✓	✓ (40)	✓

Together, the charts show that predicates of all types permit subjects whose determiner is strong (see the left column of each chart). Individual-level predicates, and predicates whose subject is an external argument, do not generally permit subjects whose determiner is weak. This holds true without exception when the subject is unpossessed (see the middle column of each chart).¹⁹ It also holds true when the subject is possessed, with one exception: when the individual-level predicate is intransitive, the subject can have a weak determiner—the null indefinite article—as long as its possessor is strong (see the top row of the right column of (50a), which is underlined). In what follows, I zero in on the analysis of this ‘exceptional’ pattern, which I claim constitutes the Chamorro version of PD.

6 AFFIRMING THAT CHAMORRO DOES HAVE PD

Why does Chamorro have PD for just (one subcase of) one of Milsark’s definiteness effects? One way of answering this question would be to try to reduce the Chamorro version of PD to some completely different aspect of the syntax and semantics of (48-49). I have already discussed one such attempt—to derive PD from a uniqueness requirement on possessed DP’s headed by the null indefinite article. This section surveys some of the other possible approaches to PD, and the reasons for rejecting them.

6.1 Are possessed DP’s definite?

As mentioned in section 2, it has been suggested that English DP’s with ‘s-possessors are interpreted as definite. Recalling this, one might think of making a similar proposal for possessed DP’s in Chamorro that are headed by the null indefinite article: perhaps these DP’s systematically have the option of being interpreted as definite. (Notice that it cannot be that these DP’s *must* be interpreted as definite, since they must also be able to count as weak for the purposes of DE1. See (44-45), and compare (45b) with (48i).) Such a hypothesis could

¹⁹ As mentioned earlier, the impact of DE2 on clauses whose individual-level predicates are transitive cannot be determined independently of the impact of DE3.

describe the ability of these DP's to count as strong for DE2 in (48-49). However, it would wrongly predict that DP's of this sort should be able to count as strong wherever they occur. It would therefore leave unexplained the fact that they do not count as strong for DE3 at all (46-47).

6.2 Are nonverbal predicates special?

Another option would be to try to identify some special, language-particular property associated with the Chamorro predicates in (48-49), from which the grammaticality of these clauses might follow. Observing that the predicates in these examples are either adjectives or nouns, one might think of proposing that they are individual-level unaccusatives (see Kratzer, 1995; Rosen, 1997) or perhaps not individual-level at all. Either way, the consequence of whatever special property was posited for these predicates would be that DE2 would somehow be suspended. Such a hypothesis could perhaps deal with (48-49). However, it could not account for examples of the type (36e-g), which argue that in general, predicates that are adjectives or nouns require their subjects to be strong.

6.3 Possessor raising?

Here is yet another, initially rather appealing option. Suppose we make the assumption that the predicates in (48-49) are individual-level unaccusatives. Then one might think of proposing that the possessor has raised out of the possessed DP—a complement of the predicate—to become the subject of the clause. Because the possessor in these sorts of examples is strong, possessor raising would bring the clause into conformity with DE2, and the outcome should be well-formed.

Such a hypothesis dovetails interestingly with what is known about the accessibility of Chamorro possessors to movement. Possessors in Chamorro can be extracted from the possessed DP—for instance, by *wh*-movement—but only when the possessed DP is headed by the null indefinite article (see Chung, 1998, pp. 286-288). We have already seen that the possessed DP is headed by the null indefinite article in examples of the type (48-49). Further, the hypothesis would enable us to explain the ungrammaticality of (46-47) in terms of the inability of the possessor in these sorts of examples to raise. Crosslinguistically, possessors raise out of the complements of predicates, not out of external arguments (see e.g. Perlmutter and Postal, 1983; much work in Relational Grammar; Massam, 1985; Baker, 1988). Because the possessors in (46-47) are lodged inside external arguments, they should be inaccessible to possessor raising and therefore unable to bring the clause into conformity with DE2.

Tempting though such a hypothesis might be initially, it has two fatal flaws. First, all the morphosyntactic evidence argues that the possessor in examples of the type (48-49) is *not* the subject of the clause. The possessor cannot trigger subject-verb agreement, for instance. Compare (51a), in which the predicate *puti* ‘hurt’ agrees with a second person singular subject, with the ungrammatical (51b), in which it agrees with the second person singular possessor of the subject.

- (51) a. Ti un-puti kumu dumiskansa hao.
 not agr-hurt if agr.rest you
 ‘You wouldn’t hurt if you had rested.’
 b. *Ti un-puti ilu-mu [*pro*] kumu dumiskansa hao.
 not agr-hurt head-agr if agr.rest you
 (‘Your head wouldn’t hurt if you had rested.’)

The possessor also cannot be spelled out as a weak pronoun, even though this morphological realization is routinely available for subjects of intransitive clauses. Compare the weak pronoun subject in (52a) with the weak pronoun possessor in (52b).

- (52) a. Puti yu’.
 agr.hurt I
 ‘I hurt.’
 b. Puti (*yu’) ilu-hu.
 agr.hurt I head-agr
 ‘My head hurts.’

The constituent that the morphosyntactic evidence identifies as the subject in these sorts of examples is, instead, the possessed DP. Thus, in (53), the predicate visibly agrees with the possessed DP, which is third person singular in (53a) and third person plural in (53b).

- (53) a. Ti u-puti ilu-mu [*pro*] kumu dumiskansa hao.
 not agr-hurt head-agr if agr.rest you
 ‘Your (sg) head wouldn’t hurt if you (sg) had rested.’
 b. Mang-alaktus nifen-mu [*pro*].
 agr-sharp teeth-agr
 ‘Your (sg) teeth are sharp.’

Second, the hypothesis crucially assumes that in every instance of (what I have been calling) PD, the possessed DP originates as a complement of the predicate. But there are

clauses for which such an assumption is untenable. Consider clauses with a prepositional predicate, such as the naturally-occurring instance of PD below.

- (54) *Disdi i apuya' pära hulu' patti-n [i matlina].*
 from the belly.button to up part-L the godmother
 'The godmother's part was from the belly-button up.' (Cooreman, 1983, p. 41)

In order for the possessed DP *pattin i matlina* 'the godmother's part' to originate as a complement of the preposition *disdi* 'from', the preposition would have to select *two* complements: *i apuya'* 'the belly button' as well as the possessed DP. But given the standard assumption that syntactic branching is binary, such a scenario seems highly unlikely.

Consider next clauses with a nominal predicate, such as (48d-e), (48j), and the following instance of PD, in which the predicate is the noun *Chamoru* 'Chamorro'.

- (55) *Chamoru asagua-ña [si Jose].*
 Chamorro spouse-agr Jose
 'Jose's wife is Chamorro.'

Now, NP's—and predicate NP's in particular—are known to be islands in Chamorro (see Chung, 1998, pp. 285, 330-331). This means that even if the N *Chamoru* were unaccusative and the entire possessed DP, *asaguaña si Jose* 'a wife of Jose's' were to originate as its complement, there would be no (legal) way for the possessor *si Jose* to become the subject of the clause. To do so, it would need to raise both out of the possessed DP *and out of the predicate NP*; but the latter is an island.

All this argues that possessor raising does not, in the end, provide a viable analysis of clauses of the type (48-49).

6.4 Is it just possessors?

Observe, finally, that if the phenomenon illustrated in (48-49) genuinely is an instance of PD, it should be activated by possessors alone. No other phrasal subconstituent of the subject should be able to bring the clause into conformity with DE2. This prediction turns out to be correct. In (56a), for instance, the subject counts as strong for the purposes of DE2 because its possessor, *i chi'luhu* 'my sister', is strong. But in (56b), the subject counts as weak despite the fact that it contains *i chi'luhu* as well, because that DP does not serve as the possessor, but rather is contained within a PP modifier.

- (56) a. Anakku' katta-nña [i chi'lu-hu].
 agr.long letter-agr the sibling-agr
 'My sister's letter (lit. a letter of my sister) was long.'
- b. *Anakku' katta ginin [i chi'lu-hu].
 agr.long letter from the sibling-agr
 ('A letter from my sister was long.')

The only way that a clause like (56b) can conform to DE2 is for the subject to have a strong determiner, as in

- (57) Anakku' i katta ginin [i chi'lu-hu].
 agr.long the letter from the sibling-agr
 'The letter from my sister was long.'

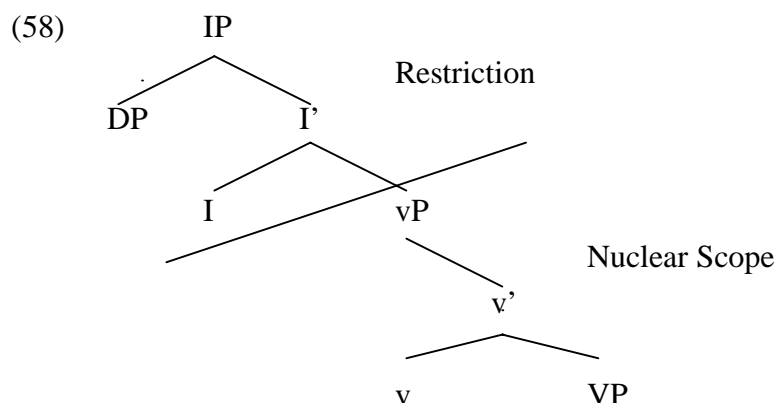
In sum, there is no evading the conclusion that for the purposes of DE2, Chamorro *does* have PD.

7 IN SEARCH OF AN ACCOUNT

Having affirmed this, we can take the Chamorro version of PD as an invitation to revisit the theoretical accounts that have been given of DE2. I will focus on two such accounts: Diesing's (1992), which appeals to the syntax of Logical Form, and Ladusaw's (1994), which invokes the Brentano-Marty-Kuroda theory of judgment types.

7.1 Diesing's account

Diesing's (1992) account of DE2 is couched in terms of the Mapping Hypothesis, her theory that there is a single, universal mapping from the Logical Form of the clause to the tripartite semantics of quantification. According to the Mapping Hypothesis, syntactic material outside the category (now called) vP is mapped into the quantifier's restriction; material inside vP is mapped into the nuclear scope.



Following Heim (1982), Diesing assumes that indefinites and other weak DP's are interpreted as free variables that must acquire their quantificational force from a quantifier or other operator that (unselectively) binds them. She further assumes that the binder of a variable must c-command it in Logical Form. Among the possible binders is the existential quantifier introduced by the LF operation of existential closure, which Diesing claims is adjoined to vP.

These assumptions set the stage for Diesing's explanation of why the subjects of stage-level predicates can be weak, but the subjects of individual-level predicates must be strong. The account runs as follows. Subjects of stage-level predicates originate inside the domain of existential closure, in the specifier of v (or lower). Although these subjects must raise to the specifier of Infl, they can be reconstructed in Logical Form to their vP-internal position, where they can become existentially closed. Hence, they can be weak. But subjects of individual-level predicates originate outside vP, in the specifier of Infl, where they are too high to be caught by existential closure. Hence, they must be strong.

It is obvious that such an account will not generalize to DE2 in Chamorro, precisely because of the Chamorro phenomenon of PD. Here is the problem: Just as in English, individual-level predicates in Chamorro cannot have subjects that originate within vP. If they could, subjects with weak determiners would be able to reconstruct and become existentially closed, and clauses of the type (36e-g) would be wrongly predicted to be grammatical. But if individual-level predicates instead had subjects that originated in the specifier of Infl, subjects with weak determiners but strong possessors would be positioned too high to be caught by existential closure. Clauses of the type (48-49) would therefore be wrongly predicted to be ill-formed.

There seems to be no convincing way out of this dilemma for a Logical Form approach to DE2. In fact, most of the potential exit strategies must be rejected for reasons that have already been discussed.

For instance, it will not work to stipulate that possessed DP's in Chamorro can be definite and therefore do not have to be existentially closed. Such an analytic move would wrongly predict that clauses of the type (46-47) should be grammatical; see the discussion in 6.1.

Nor would it work to suggest that clauses of the type (48-49) are *impersonal* unaccusative clauses. Such a suggestion could potentially bring clauses like (48-49) into conformity with the Mapping Theory: if the possessed DP were to remain within vP and the possessor were to raise covertly to the specifier of Infl in Logical Form, the possessed DP would be caught by existential closure. However, evidence against such a scenario has already been presented; see the discussion around examples (54-55). An additional argument is supplied by subject-verb agreement. Chamorro does, of course, have one classic type of impersonal unaccusative clause—the existential construction. In existential clauses, it is impossible for the internal argument to trigger subject-verb agreement. Agreement is triggered instead by the null expletive subject, which is invariably third person singular.

- (59) a. (*Man)-guäha famagu'un gi giput.
 agr-exist children Loc party
 'There was/*were children at the party.'
- b. Pära u-guäha famagu'un gi giput.
 Fut agr-exist children Loc party
 'There will (sg.) be children at the party.'

However, as was shown earlier in (53), the possessed DP in clauses like (48-49) *must* trigger subject-verb agreement. This contrast with existential clauses argues that the possessed DP is not, after all, the internal argument of an impersonal unaccusative clause: either the clause is not impersonal or the possessed DP is not an internal argument. But then the preconditions no longer obtain for possessor raising in Logical Form.

I conclude that once PD is factored in, Diesing's theory cannot account for DE2 in Chamorro.²⁰

7.2 Ladusaw's account

In a brief but influential discussion, Ladusaw (1994) suggests a way of deriving DE2 from the theory of judgment types developed by the philosophers Franz Brentano and Anton Marty and revisited from a modern linguistic perspective by S.-Y. Kuroda. (See also Kuroda, 1972; Horn, 1997; Jäger, 2001; and for a more nuanced view, Kuroda, 2005.) This theory recognizes two fundamental types of judgments—mental or cognitive acts expressed by the utterance of a sentence. Here is how Kuroda (1972, p. 154) describes them.

...unlike either traditional or modern logic,...there are two different fundamental types of judgments, the categorical and thethetic. Of these, only the former conforms to the

²⁰ See also Jäger (2001), who argues that Diesing's theory cannot account for the facts of German word order.

traditional paradigm of subject-predicate, while the latter represents simply the recognition or rejection of material of a judgment. Moreover, the categorical judgment is assumed to consist of two separate acts, one, the act of recognition of that which is to be made the subject, and the other, the act of affirming or denying what is expressed by the predicate about the subject. With this analysis in mind, thethetic and the categorical judgments are also called the simple and the double judgments (*Einfache Urteil* and *Doppelurteil*).

In Ladusaw's (1994) terms, *categorical judgments* first present an individual and then affirm or deny a property of that individual. *Thetic judgments* simply affirm or deny the presentation of an individual or eventuality; for Ladusaw, they affirm or deny a description. The DP that expresses the 'psychological subject' of a categorical judgment, as Horn (2001[1989], p. 511) calls it, is often but not always the syntactic subject. For instance, in Japanese, according to Kuroda (1972), this DP is the left-peripheral topic marked by *wa*.

Ladusaw's proposal for deriving DE2 from the theory of judgment types goes like this: Individual-level predicates denote properties, and properties always form the second part of the basis for a categorical judgment. Strong construals of DP's can denote individuals, whereas weak construals cannot. (Weak construals denote descriptions.) Only individuals can form the first part of the basis for a categorical judgment. Therefore, subjects of individual-level predicates must be strong.

Can this account be generalized to DE2 in Chamorro? I believe it can. The key lies in the imperfect fit between syntactic subjects, on the one hand, and the psychological subjects of categorical judgments, on the other.

Consider the Chamorro sentences with individual-level predicates that were discussed in 5.2 and 5.4. In Ladusaw's world, these sentences express categorical judgments. The question of interest is how the individual that forms the first part of the basis for the judgment is supplied. Suppose we claim that in Chamorro, this individual can be supplied by the syntactic subject *or* by the possessor of the subject, if there is one. Then most of the patterns summarized in the chart in (50a) fall into place.²¹

When there is no possessor, the individual that forms the first part of the basis for the judgment must be supplied by the syntactic subject. The subject must therefore be strong—it cannot be headed by a weak determiner (see (36)). The property that forms the second part of the basis for the judgment is supplied, as expected, by the individual-level predicate.

When the subject has a possessor, the individual that forms the first part of the basis for the judgment can, in principle, be supplied by the syntactic subject (= the entire possessed DP) or by the possessor. The second option provides the explanation of the 'exceptional' pattern in (48-49). In these sentences, the possessed DP cannot supply an individual, since it is headed by

²¹ For simplicity, I ignore the fact that the possessor must be defined recursively to handle (49). The absence of PD when the individual-level predicate is transitive (47) is discussed later, in 7.4.

the null indefinite article—a weak determiner—and consequently denotes a description. (Recall from 5.1 that these Chamorro indefinites must be composed by C&L’s nonsaturating operation Restrict.) It is, instead, the possessor that must supply the individual; therefore, the possessor must be strong. The property that supplies the second part of the basis for the judgment is the (complex) property denoted by the rest of the sentence (see e.g. Partee, 1999). The result is a categorical judgment similar to the judgments expressed by English sentences formed with individual-level *have* (see Schafer, 1995). Note, in this connection, that most of the examples in (48-49) can be given English translations with *have*; ‘He has a big chapel at Tumon’ (48a), ‘Why do you have such a yellow color?’ (48b), and so on. Another English parallel, observed by Lisa Travis (personal communication), can be found in sentences with complex past participles of the type *She is short-waisted / open-minded / cold-blooded*. Significantly, these participles are usually formed from adjectives that are individual-level, not stage-level; compare *long-toed*, *black-eyed*, and *brown-haired* with **warm-toed*, **sick-eyed*, and **dirty-haired*.

The upshot is that Ladusaw’s theory succeeds in deriving DE2 in Chamorro, including the Chamorro version of PD. The crucial claim is that in this language, the psychological subject of a categorical judgment can be expressed by the syntactic subject or by its possessor.

7.3 Further evidence

This crucial claim receives some independent support from the patterning of Chamorro topics.

Chamorro permits the clause to have a left-edge topic that is adjoined to IP and resumed by a (null) pronoun that occurs somewhere to the right of the predicate (see Chung, 1998, pp. 262-268). Consider the following, in which the topic is italicized.

- (60) Pues *si Chungi*’ ha-kumbívida [*pro*] si Kanariu pära u-piknik i dos.
 so Chungi’ agr-invite.Prog Kanariu Fut agr-picnic the two
 ‘So Chungi’ invited Kanariu (for the two of them) to have a picnic.’ (Borja,
 Borja & Chung, 2006, p. 83)

The topic must be familiar. I claim that clauses with topics express categorical judgments, and the topic supplies the individual that forms the first part of the basis for the judgment. This is essentially what Kuroda (1972) proposed for Japanese.

Now, the topic in Chamorro typically corresponds to the syntactic subject; it cannot correspond to a direct object or oblique. What is significant is that the topic can also correspond to *the possessor* of the subject. This occurs routinely when the clause also manifests PD.

- (61) a. *I eskobiya, ti géf-dangkulu trunko-nña [pro].*
the eskobiya not agr.very-big stem-agr
‘The broom plant does not have very large stems (lit. The broom plant, stems of it are not very large).’ (Borja, Borja & Chung, 2006, p. 123)
- b. *Ya esti na bihu si Juan na’an-nña [pro].*
and.then this L old.man Juan name-agr
‘And this old man’s name was Juan.’ (Cooreman, 1983, p. 65)
- c. *Pues ädyu i dos bunitu magahit magagu-nñiha [pro].*
so that the two agr.pretty truly clothes-agr
‘So those other two had really beautiful clothes.’ (Cooreman, 1983, p. 65)

But it also occurs, occasionally, in other sorts of intransitive clauses (see Chung, 1998, p. 265). In (62), for instance, the predicate is a stage-level unaccusative verb and its subject is a definite possessed DP.

- (62) *Un tiempu esti i dos umäsagua mattu i minalagu’-ñiha [pro] na*
one time this the two spouses agr.arrive the desire-agr Comp
pära u-gäi-patgun.
Fut agr-have-child
‘One time the desire came to these two married people to have a child (lit. these two married people, their desire arose).’ (Cooreman, 1983, p. 74)

The fact that the topic can correspond to the possessor of the subject in clauses with PD provides further evidence that the possessor in such clauses expresses the psychological subject of the judgment. Moreover, the fact that the topic can correspond to the possessor *even without* PD reveals that in general, Chamorro permits either the syntactic subject or its possessor to fulfill this function.

7.4 On the limitations on PD in Chamorro

Finally, it is time to return to two questions that have been lurking in the background. Why does Chamorro fail to exhibit PD for the purposes of DE1? And why is PD absent when the individual-level predicate is transitive (see (47))?

The first question can be answered rather simply. The account just given of PD in terms of Ladusaw’s theory claims that in Chamorro, the psychological subject of a categorical judgment can be expressed by the syntactic subject or by its possessor. Nothing about this would lead one to suppose that in this language, *the description* affirmed or denied by athetic judgment ought to be able to be expressed by, say, the possessor of the pivot of an existential

clause. In other words, the account provides no reason at all to expect Chamorro to exhibit PD for the purposes of DE1. This is the result we want.²²

The answer to the second question has already been suggested. From the standpoint of the theory of judgment types, a sentence with a transitive individual-level predicate, such as (63), ought to be able to express a categorical judgment just as successfully as sentences of the type (48-49). In (63), the possessor *i famagu'un Jose* 'Jose's children' should supply the first part of the basis for the judgment, and the rest of the sentence should supply the second part. The fact that this sentence is nonetheless ill-formed suggests that some other restriction is being violated.

- (63) *Ha-tungu' i ansa ma'estra-n [i famagu'un [Jose]].
 agr-know the answer teacher-L the children Jose
 ('A teacher of Jose's children knows the answer.')

Indeed, a good candidate for this restriction has already been introduced: DE3, the Chamorro-particular effect that requires an external argument to be both strong and specific when it is realized within the clause (see (41)). As observed earlier, all transitive individual-level predicates in Chamorro are transitive verbs, and all transitive verbs in the language have an external argument. This means that there is no way that a clause like (63) could exhibit PD and simultaneously conform to DE3.

What is needed to make this story concrete is some account of the language-particular DE3. As an initial gesture in this direction, I now restate DE3 in terms of the theory of judgment types, as follows.

- (64) *DE3 (second pass)*
 An external argument that is realized within the clause must provide the first part of the basis of a categorical judgment.

(64) guarantees that when an external argument is realized within the clause, it must be strong. Depending on how quantification is handled in the theory of judgment types—a controversial matter, as Kuroda (1972) and Ladusaw (1994) observe,—(64) might also ensure that when an external argument is realized within the clause, it must specify a referential argument. Notice, finally, that this restatement makes it clearer just what the difference is between DE2 and DE3. DE2 follows from the theory of judgment types, as Ladusaw showed, whereas DE3—even when phrased in terms of judgment types—requires an additional stipulation.

²² Something further must be said, then, to explain why English exhibits PD for the purposes of DE1 as well as DE2. The explanation—whatever it is—should also extend to the PD-like effects found in bound variable anaphora and negative polarity items in English; see note 4.

This concludes my account of the Chamorro version of DE2 in terms of Ladusaw's theory. The fact that it succeeds in handling PD provides a strong argument in favor of a semantic-pragmatic explanation of this definiteness effect.

8 CONCLUSION

Let me bring this investigation to a close by first pointing to some questions that could be asked next and then saying something about where we have arrived.

8.1 Other possible sightings of PD

The idea that a possessor can express the psychological subject of a categorical judgment is not new. For instance, Aissen (1999) claims that the Mayan language Tz'utujil has a designated position in the clause's left periphery for the DP that expresses the psychological subject of a categorical judgment. She then establishes that a possessor can occupy that position. In a much earlier discussion of 'subjectivization' in Japanese, Kuno (1973) shows that the possessor of the subject can be realized as a left-peripheral topic marked by *wa*. When Kuno's observation is reinterpreted in light of Kuroda (1972), what emerges is the claim that in Japanese, the possessor of the subject can express the psychological subject of a categorical judgment. (Thanks to Junko Itô for this observation.) Finally, Keenan and Ralalaoherivony (2000) investigate an extraordinarily productive possessor raising construction in Malagasy that can occur when the predicate is both intransitive and individual-level. In this construction, when the predicate's lone argument is possessed, the possessor surfaces as the subject, and the possessed noun incorporates into the predicate. If one takes seriously the idea that Malagasy 'subjects' are actually topics (see Pearson, 2005), then this Malagasy construction might well provide an unusually close parallel to the Chamorro pattern seen in (48).

Here, however, the focus has not been exclusively on the claim that possessors can express psychological subjects, but rather on what this claim can contribute to an understanding of PD and, ultimately, the definiteness effects—in particular, DE2. From this perspective, a natural question to raise is whether Tz'utujil, Japanese, and Malagasy also exhibit PD. As far as I can tell, this question has not yet been investigated for any of these languages. The answers might well reveal to what extent the account given here of DE2, and the Chamorro version of PD, can be extended to a broader range of languages.

8.2 Why *possessor dominance*?

Although a serious crosslinguistic survey of PD remains to be undertaken, the investigation here suggests some preliminary remarks about the typology of PD.

Crosslinguistically, PD is not limited to languages in which the possessor and the determiner are in complementary distribution (contra (8a)). The Chamorro evidence makes this quite clear. Nor is PD uniformly associated with possessors in any one designated syntactic position, such as the specifier of D or a left-peripheral topic position (contra (8b)); see especially English examples of the type (10). Finally, PD is not limited to languages in which possessed DP's are always interpreted as definite (contra (8c)); recall the discussion of Chamorro in 6.1. More generally, PD does not seem to be associated with any uniform semantics—an unsurprising point, given the range of semantic contributions made by possessors. What, then, explains why it is specifically *possessors* that can be dominant?

One conceivable approach to the issue is suggested by Keenan's (1974) Functional Principle. This principle, which constrains the logical structure of certain natural language expressions, states that functions may vary according to the choice of argument, but the interpretation of an argument expression must be determined independently of the function applied to it. In clauses, according to Keenan, the subject serves as the argument and the predicate, as the function; in possessive constructions, the possessor serves as the argument and the possessed, as the function. The claim that the possessor has an interpretation determined independently of the interpretation of the possessed might well help to explain why it is the possessor, and not any other subconstituent of the possessed, that stands in for the possessed in instances of PD. The fleshing out of this speculation remains a project for the future.

8.3 Where we are

The evidence from Austronesian languages presented here expands the typological profile of PD in various ways. The Maori evidence shows that PD is not universal. The Chamorro evidence reveals, among other things, that PD need not hold across the board, but instead can target a particular definiteness effect—here, DE2.

I have proposed that in Chamorro, the PD phenomenon follows from (a) the ability of certain possessors to express the psychological subject of a categorical judgment, plus (b) Ladusaw's (1994) account of DE2 in terms of the theory of judgment types. Overall, the analysis supports Ladusaw's semantic-pragmatic theory of DE2 over Diesing's (1992) syntactic approach to this definiteness effect. And it invites us to see the theory of judgment types as ultimately responsible for DE2 not just in Chamorro, but in all languages. Whether this view of DE2 can survive the test of further crosslinguistic investigation remains to be seen.

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