Verb-Stranding VP Ellipsis: A Cross-Linguistic Study

by

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Abstract

This thesis presents a study of a construction which I refer to as Verb-Stranding VP Ellipsis. The construction is studied here, specifically, in two distinct senses.

First, in chapter two, diagnostics are proposed by which the VP Ellipsis ("VPE") construction can be *identified*—irrespective of whether the main verb involved is null or overt. It is proposed that these diagnostics can be used to rule out the possibility that the data at issue are cases of other types of null anaphora, such as null arguments, Stripping, Gapping, and Null Complement Anaphora. It emerges from this section of the thesis that Modern Hebrew, Modern Irish, and Swahili have V-Stranding VPE data which form a natural class with English's Aux-Stranding VPE, while Japanese, Korean, Italian, and Spanish do not.

The second focus is the question of how V-Stranding VPE should be *generated*. Chapters 3 and 4 argue in favor of an analysis involving PF Deletion of a VP out of which the main verb has raised, and against an LF Copying treatment. These arguments, in part, involve the *Verbal Identity Requirement* on VP Ellipsis, a novel generalization involving strict identity in root and derivational morphology between the antecedent- and target-clause main Vs of the construction. Within the previously known requirement that elided phrases express semantically Given information, I argue that this generalization results from the fact that the head of an elided phrase must itself express Given information—whether or not the head surfaces as phonologically null.

Résumé

Dans cette étude, on considère en détail une construction que j'appelle « L'élision d'une expression verbale sans l'élision du verbe principal » (anglais « V-Stranding VP Ellipsis »). Cette construction est étudiée ici, spécifiquement, dans deux sens distincts.

Dans le chapître 2, on propose des diagnostics grâce auxquels on peut *identifier* la construction « élision d'une expression verbale » (« EEV », anglais « VP Ellipsis »), que le verbe principal dans l'expression verbale soit manifeste ou élidé. On soutient que ces diagnostics peuvent être utilisés pour éliminer la possibilité que les données pertinentes soient des exemples d'autres types d'anaphore nulle, tels que argument du verbe nul, le « Stripping », le « Gapping », et le « Null Complement Anaphora ». Ainsi, on propose dans cette section que l'EEV sans l'élision du verbe dans les grammaires de l'hébreu, de l'irlaindais et du swahili forme une classe naturelle avec l'EEV avec l'élision du verbe en anglais. On soutient aussi que cette construction n'éxistent pas en japonais, en coréen, en espagnol, ou en italienne.

Ensuite, on considère la question de comment *générer* les exemples d'EEV sans l'élision du verbe. Dans les chapîtres 3 et 4, on propose une analyse qui utilise la suppression d'une expression verbale au niveau de la Forme Phonologique (« la suppression FP », anglais « PF Deletion ») après le déplacement du verbe principal à une position en dehors de l'expression verbale, et on présente une explication de la raison pour laquelle une analyse qui utilise des copies de la Forme Logique (« copie FL », anglais « LF Copying ») n'est pas viable. Ceci implique, en partie, la Condition d'Identité Verbale, une généralisation proposée ici pour la première fois, impliquant une identité stricte de la racine et dans la morphologie dérivationnelle entre les verbes principaux des propositions

antécédentes et des propositions cibles. Dans le cadre de la condition connue selon laquelle les syntagmes élidés expriment une information sémantique donnée (anglais « Given »), je soutiens que la condition d'identité verbale résulte du fait que la tête d'un syntagme élidé doit elle-même exprimer l'information donnée sémantiquement—que la tête soit phonologiquement manifeste ou nulle.

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The tack taken by this thesis and in my earlier, related research on Hebrew Null Objects owes a great debt to the initial study of these phenomena carried out by Edit Doron (1990, 1999). It is noteworthy that the profile of both Hebrew VP Ellipsis and Hebrew Null Objects which emerges here is entirely consistent with the majority of claims originally made in Doron (1990).

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Table of Contents

Abstract ii

Résumé iii

Acknowledgements v

Chapter 1: Introduction

1. Introduction: Core Data Considered in this Thesis 1
2. Key Aims of the Thesis, and a Chapter-by-Chapter Summary 5
   - 2.1. Overview of the key aims and tasks undertaken 5
   - 2.2. Task #1: Establishing a V-Stranding VP Ellipsis diagnosis 6
   - 2.3. Task #2: Bringing V-Stranding VPE data to bear on the theory of VP Ellipsis 10
3. On the Motivation for Integrating V-Stranding VP Ellipsis Data into (VP) Ellipsis Theory 19

Chapter 2: Establishing a Diagnosis of V-Stranding VP Ellipsis

0. Introduction and Chapter Overview 23
1. A First Consideration of VPE Diagnostics 27
   - 1.1. Licensing by an inflectional head 27
   - 1.2. Additional traits characteristic of English VPE 31
2. The Null Argument Versus VP Ellipsis Ambiguity Problem, and Initial Issues in Controlling for Null Argument Structures 35
   - 2.1. The problem of ambiguity between a VPE and null argument analysis 36
   - 2.2. Initial control techniques for null argument structures in V-Stranding VPE examples 38
3. Teasing Null Objects Apart from VP Ellipsis in Hebrew 42
4. Ruling Out a Null Object Analysis for Swahili and Ndendeule VPE Data 54
5. Ruling Out a Null Argument Analysis for Irish VPE Data 58
   - 5.1. The motivation for V-to-Infl raising in Irish 59
   - 5.2. The distribution of VP-internal null arguments in Irish 64
   - 5.3. The existence of putative Irish VPE examples which cannot be

instances of independently null VP-internal arguments 72
6. The Case Against V-Stranding VP Ellipsis in Japanese and Korean . . . 73
6.1. Overview of the motivation for V-Stranding VPE in Japanese and Korean 76
6.2. Japanese and Korean VP-internal elements can elide when the rest of the VP is overt 78
6.3. The Otani and Whitman (1991) proposal 82
6.4. Argument #1 against VPE: Japanese and Korean VP-adverbials can elide neither independently nor in null VPs 89
6.5. Argument #2 against VPE: Japanese and Korean sloppy identity reading availability correlates neither with English VPE facts, nor with a VPE structure being possible 93
6.5.1. Case (Ai): Japanese lacks sloppy identity where English VPE allows it 94
6.5.2. Case (Aii): Japanese allows sloppy identity where English VPE does not 99
6.5.3. Case (Bi): Korean lacks sloppy identity where a VPE structure is possible 104
6.5.4. Case (Bii): Japanese and Korean allow sloppy identity where a VPE structure is impossible 107
6.6. Argument #3 against the VPE Proposal: Sloppy identity readings can be derived for null DPs 114
6.7. Summing up 117
7. Chapter Summary and Conclusions 120

Chapter 3: Deriving the Verb Stranding Effect

0. Introduction and Chapter Overview 123
1. The PF Deletion Analysis of Ellipsis 128
2. The LF Copying Analysis of Ellipsis 138
   2.1. Wrapping up 141
3. Deriving V-Stranding VPE via PF Deletion: Part one 141
4. The Argument Against LF Copying from V-Stranding VPE: Part one . 146
5. Chapter Summary and Conclusions 155

Chapter 4: Capturing the Isomorphism Requirements of V-Stranding VPE

0. Introduction and Chapter Overview 156
1. The Verbal Identity Requirement 157
   1.1. The Verbal Identity Requirement in Hebrew 157
   1.2. On the cross-linguistic generality of the Verbal Identity Requirement 166
   1.3. The novelty of the Verbal Identity Requirement within the larger domain of ellipsis isomorphism 171
2. The Proposed Account: Deriving the Verbal Identity Requirement with PF Deletion 175
3. The Argument Against LF Copying: Part Two 184
4. Chapter Summary and Conclusions 194

Chapter 5: Conclusion

0. Introduction and Chapter Overview 200
1. Summary and Implications of the Arguments Made in this Thesis 200
2. Issues for Further Study 204
   2.1. Diagnosing additional cases of VP Ellipsis 205
   2.2. What is VP Ellipsis?: Taking stock of where we now stand 207
   2.3. Analytic questions and predictions 210
3. Final Remarks 214

References 215

Chapter 1

Introduction

1. Introduction: Core Data Considered in this Thesis

This thesis concerns itself with a type of Verb Phrase Ellipsis (VP Ellipsis or "VPE") in languages outside English, and in which the main verb (V) of the clause in which the elision occurs (referred to here as the *target clause)* remains overt obligatorily, rather than eliding. A typical example of the well-studied English VP Ellipsis construction appears in (1). Here, the main V of the target clause obligatorily *elides*, along with the rest of the VP, leaving only one or more auxiliary V overt:

English VPE with Main V Obligatorily *Null*

(1) Arthur [$_{VP}$ brought a present to Hall],
✓and Julia did [~~bring a present to Hall~~] too
* and Julia brought too; *and Julia will bring too.

In contrast to such English examples, I will be concerned almost solely here with non-English data such as (2) from Hebrew, (3) from Irish, and (4) from Swahili.[1] These examples differ superficially from their English counterparts in displaying an *overt* target-clause main V which bears all verbal inflection, thus lacking auxiliary Vs altogether. For this reason, I use the term "V(erb)-Stranding VP Ellipsis" to describe this type of VPE:[2]

[1]This work is carried out within the generative, synchronic linguistic tradition: thus 'Hebrew' here refers just to Modern Hebrew, 'Irish' refers just to Modern Irish, and so on.

[2]Conventions used in examples throughout this thesis are as follows. First, Hebrew examples are presented with North American transcription conventions; additionally, [c] represents the affricate [ts].

The bracketing of the internal arguments in English translations of V-Stranding VPE examples is used just as a notational device, to group together the elements which lie internal to the targeted VP at the representational level relevant for VP Ellipsis.

(continued...)

Hebrew VPE with Main V Obligatorily *Overt* *(Doron 1999:ex.13)*

(2) Q: Šalaxt etmol et ha-yeladim le-beit-ha-sefer?
send[Past2Fsg] yesterday ACC the-children to-house-the-book
'(Did you) send [yesterday the children to school] ?'

A: Šalaxti.
send[Past1sg]
'(I) sent [~~yesterday the children to school~~] .'

(cf. English '...I <u>did</u> [~~send the children to school yesterday~~].')

Irish VPE with Main V Obligatorily *Overt* *(McCloskey 1991:ex.27a)*

(3) Dúirt mé go gceannóinn é agus cheannaigh.
said I COMP buy[Condit1sg] it and buy[PastAnl]
lit. 'Said I that would buy [(I) it] and bought [~~I it~~]. '

(cf. English '...and I <u>did</u> [~~buy it~~].')

---

[2](...continued)

In Hebrew morpheme glosses, the traditionally-termed *Benoni* conjugation used in Hebrew present tense and participial verb forms is glossed as *[Bni]*. Thus, *yoda'at*, the present tense feminine 'knows' as in 'she knows', is glossed as *know[BniFsg]*. Morpheme glosses abstract away from certain aspects of morphological detail when they are not relevant to issues at hand; thus, Hebrew *li*, for instance, is generally glossed as 'to.me' rather than as the more strictly correct 'DAT[1sg]'.

As standard in the literature, Irish data are presented here using the language's orthography; see e.g. Ó Siadhail (1989) for pronunciation guides. Irish VPE examples are sometimes given with more literal, pseudo-English translations which preserve Irish's VSO finite clausal basic order. This is done to make more transparent the fact that the post-verbal subject is among the VPE-internal elements which are elided. Chapter 2 presents explicit discussion of this fact, as well as of the fact that such elided subjects are *not* instances of Irish's subject *pro* when shown as struck-through, since they coincide in such cases with *analytic* (as opposed to synthetic) V forms devoid of subject agreement morphology. To make the latter fact more transparent, Irish analytic V forms are glossed using the abbreviation "Anl"; thus, *cuireann sé*, 'put[Pres<u>Anl</u>] he', i.e. 'he puts'. In contrast, synthetic V forms can be identified by the presence of subject agreement in their glosses, e.g. *cuirim*, 'put[Pres<u>1sg</u>]', i.e. '(I) put'.

'FV' in Bantu morpheme glosses represents a 'Final Vowel'. Note that I will remain neutral about whether the object clitic marked on verbs is ultimately best analyzed an object-V agreement morpheme, as argued by e.g. Bergvall (1986), Kinyalolo (1991), and Ngonyani (1998), or, rather, as an incorporated object pronoun, as in Bresnan and Mchombo (1987) and Bresnan (1993). The choice between the two analyses will not crucially affect the tenability of the VPE analysis argued for here for Swahili and Ndendeule examples, so far as I can see. However, for the sake of concreteness, I will refer to this element as an object agreement morpheme in the present text.

Swahili VPE with Main V Obligatorily *Overt* *(Ngonyani 1996a:ex.20a)*

(4) Mama a-li-tak-a ku-m-nunul-i-a m-toto vi-atu
mother 1Su-Past-WANT-FV Infin-1Obj-BUY-Applic-FV 1-child 8-shoe

na baba a-li-tak-a pia.
and father 1Su-Past-WANT-FV also
'Mother wanted [to buy the child shoes] and father wanted [~~to buy the child shoes~~] too.'
(cf. English '...and father did [~~want to buy the child shoes~~] too.')

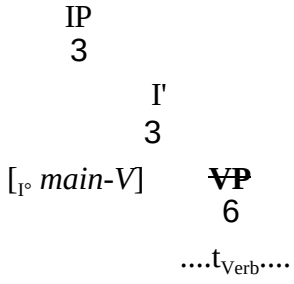
For these languages, such data were first argued to involve a variety of VP Ellipsis by Doron (1990, 1999), Ussushkin/Sherman (1997), Goldberg (1998, 2001) for Hebrew; McCloskey (1991, 1995) for Irish; and Ngonyani (1996a,b, 1998) for Swahili and Ndendeule. For each language, these researchers argued the effect of main V stranding to arise because there is independent motivation that the main V lies in a high position, within the inflectional domain, in overt syntax.

Within the Chomskyan approach in which this thesis is written, this high verbal position is traditionally viewed as the result of obligatory main V raising to (a subpart of) Infl—the inflectional layer of the clause which lies immediately above the verb phrase. V-Stranding VPE examples like those in (2-4) are thus argued, on this view, to involve ellipsis of a VP whose main V actually lies in a position which c-commands the null constituent. The material which lies internal to the VP at the level of representation relevant for VP Ellipsis will therefore *exclude* the main V, with the effect that the main V is left overt. This is shown schematically as follows:[3]

[3]'IP' and 'VP' are used throughout this thesis, in trees as well as text, as abbreviations for the *entire* inflectional and verb-phrasal domains, respectively, wherever the exact identity of the subparts of each is not at issue. (Thus, under current standard conceptions of phrase structure, 'VP' will often indicate e.g. *v*P or voiceP, and so on.) Note too that I have chosen to use X-bar theory in trees here, but, as far as I have been able to tell, nothing crucial hinges on this move.

VP Ellipsis Schematic for V Raising Languages: Main V Lies outside the VP

(5)



V-Stranding VP Ellipsis of this sort has now been referred to as existing in sixteen different languages within the extant literature, all such claims having emerged relatively recently, since roughly the early 1990s. The extent to which the different languages involved have been accepted by the field as a whole as having this construction has varied a great deal. Much of this literature, furthermore, has so far escaped the attention of many linguists, as discussed further in Section 3 below.

Nonetheless, such V-stranding examples for Hebrew, Irish, and Swahili are motivated extensively in Chapter 2 to instantiate the same basic VP Ellipsis phenomenon as is familiar from English. Most significantly, on this point, the discussion there argues that the target clauses instantiating VP Ellipsis in these languages appear in the same broad range of sentence types as does English VP Ellipsis. Such sentence types include coordinated CPs, adjacent CPs uttered by the same speaker, and question-answer pairs that cross a speaker boundary; targeted null VPs which appear within one or more embedded clauses; examples which give rise to "sloppy" as well as "strict" identity readings; and licit target VPs within syntactic islands, as well as within just one conjunct of a coordinated structure. Further, an alternative analysis of the examples at issue as cases of one or more independently dropped objects can be demonstrated to be untenable.

2. Key Aims of the Thesis, and a Chapter-by-Chapter Summary

2.1. Overview of the key aims and tasks undertaken

My principal aim in this thesis is to begin to bring the traits of non-English, V-Stranding VP Ellipsis data to bear on the theoretical question of how ellipsis generally, and VPE in particular, is best treated within a broad conception of post-Principles and Parameters Theory and Minimalism (see e.g. Chomsky 1995, 2000, 2001). As discussed in Section 3 below, this is a move which has not yet been made to my knowledge. Given space considerations, I have chosen to focus upon those issues which I find most pressing given our current understanding of V-Stranding VP Ellipsis as reflected in the extant literature, as well as upon issues which might prove most useful in helping to foster further work which shares this aim. There are two principal ways in which I approach this goal.

The first task which I undertake is to make the case that sufficiently conclusive evidence now exists to warrant data from Hebrew, Irish, and Swahili being added to the well-studied data of English VP Ellipsis as core facts which any theory of the phonological, interpretive, and syntactic traits of VP Ellipsis should capture. In so doing, I propose a method of diagnosis which might be employed in future research in order to establish that (V-Stranding) VP Ellipsis is or is not instantiated in a given language. The second core task undertaken is to begin a discussion of how the various versions of generative syntactic VP Ellipsis theory—all designed presently to account just for English data—fare with respect to V-Stranding VPE data from Hebrew, Irish, and Swahili.

In the following two sections, I lay out the way in which these tasks are carried out, including a chapter-by-chapter summary.

2.2. Task #1: Establishing a V-Stranding VP Ellipsis diagnosis

The first part of this thesis presents and applies steps which can reasonably be taken to be

involved in establishing a V-Stranding VP Ellipsis diagnosis in a given language. This set of diagnostics is presented in Chapter 2, and is compiled from what one can glean from the extensive literature on English VP Ellipsis as being among the construction's core traits, as well as from the traits of non-VPE ellipsis types such as null objects, gapping, and stripping (the last known alternatively as 'Bare Argument Ellipsis'), which are to be ruled out in making a VP Ellipsis diagnosis.

With respect to the content of this chapter, an initial point is of note. Since, as mentioned above, there are currently sixteen languages for which suggested diagnoses of V-Stranding VP Ellipsis have already been made, it might be asked whether a need still exists for the positing of *diagnostics* for this construction. My answer to such a question, however, is that such a need does indeed exist. VP Ellipsis was not generally considered to exist outside English until the early 1990s. This means that the question of what should count as diagnostics for the construction was not a topic subjected to the debate of experts in the field during this time, since there was no diagnosing taking place.

This has given rise to a situation in which, once a literature on non-English VPE *did* begin to emerge, there has not been systematic use of a consistent set of traits which have been shown to hold for the data in each language which were claimed to instantiate VPE. There are some notable exceptions to this (see especially the careful work of Ngonyani 1996a, as well as initial work by Doron 1990 and McCloskey 1991), but there are also several cases in which just the traits of V-Stranding (i.e. satisfying the requirement that the null VP be governed by an overt inflectional head, as proposed by e.g. Lobeck 1992, 1995 and Zagona 1988b) and the presence of some other trait—sloppy identity readings, for instance—have been used alone to motivate a claim of VP Ellipsis.

Such inconsistency in the application of diagnostic evidence seems likely to have contributed

to the present situation in the literature on the derivation and isomorphism requirements of VPE. Thus, and as discussed further in Section 3 below, English has remained the sole language from which data are typically considered in such literature, with non-English facts relegated at best to the status of footnotes.

For this reason, it seems to me that it would be helpful at this point to propose an explicit method by which any claim that VP Ellipsis exists in a given language can be motivated. It is my hope that, by doing so here, such diagnostics can begin to be debated, and, if necessary, revisions and augmentations can be proposed. By arriving at a more or less agreed-upon set of traits which VP Ellipsis should be expected to have in any given language, future research should be better able to make a well-motivated case that VPE exists in other languages outside those treated here, as well as being able to rule out the existence of the construction in other languages. Ideally, this process should thus help us as a field to deepen our understanding of the cross-linguistic core traits and points of variation for the construction. This would enrich the empirical base from which VPE theory (and ellipsis theory more generally) is derived, thereby advancing the development of formal treatments of the construction toward greater cross-linguistic significance and tenability.

With this in mind, Chapter 2 is concerned with two main tasks. First, it lays out means by which V-Stranding VPE can be distinguished from other types of null anaphora, such as Stripping, Gapping, and Null Complement Anaphora. This is presented alongside a discussion of the relevant traits of English VPE that V-Stranding VPE can also be reasonably expected to display. Second, this chapter presents several case studies of careful analytic discrimination between V-Stranding VPE and an alternative analysis involving independently elided null arguments. I view this latter issue as a persistently under-recognized and inadequately addressed problem within the existing literature on

non-English VPE.

Using the syntactic traits of each individual language, it is shown that Irish does not allow its direct or indirect objects to elide while other VP-internal material remains overt—i.e. that it has no null object construction—but that it *does* allow its such objects to drop in the *sole* situation in which all other VP-internal elements elide as well. Further, it is shown that putative Irish VPE examples involve elision of the VP-internal *subject* as well, as *part of* the elision of the entire VP. Irish subjects are well-known to licitly drop when co-occurring with *synthetic* V forms which bear overt subject-V agreement marking, and to be unable to drop when accompanied by an *analytic* V which bears no such inflection. Even in the latter case, however, the Irish subject still goes missing in all putative VPE data—i.e. in data in which all other VP-internal material also surfaces as null.

In turn, Hebrew and Swahili (with accompanying discussion of the related Tanzanian Bantu language of Ndendeule) are shown to allow only their direct objects to drop independently, and this only under certain conditions. Hebrew null objects are shown to be obligatorily inanimate, while animate direct objects *can* elide when the other VP-internal elements do. Swahili null direct objects are shown to be licit only when co-occurring with an object-agreement morpheme on the V. Thus, (A) using animate direct objects in Hebrew, (B) using Vs which lack an object-agreement morpheme in Swahili, or (C) using VPs which contain more internal arguments than just a direct object in all three of Hebrew, Swahili, and Ndendeule provide ways to rule out the possibility of an alternative Null Object analysis for putative VPE structures in each language. When this is done, we see that grammatical data exist in both Hebrew and Swahili which cannot be analyzed as involving null objects, but which nonetheless involve an overt main V and all remaining VP material phonetically null.

The final section of Chapter 2 then considers Japanese and Korean, for which I compile arguments from various sources and perspectives to the effect that V-Stranding VP Ellipsis should be concluded *not* to exist, contra the proposals in Otani and Whitman (1991). First, and unlike in the cases of the thesis' core languages just discussed, Japanese and Korean allow each argument internal to the VP to elide independently, and without any restrictions such as those found for null objects in e.g. Hebrew, Swahili, and Ndendeule. Examples of putative V-Stranding VPE are thus not distinguishable from structures in which the VP has remained intact, but with every element internal to the VP having elided individually.

This problem then combines with an array of empirical arguments against a VPE analysis given by Hoji (1995, 1998), Oku (1998), and Tomioka (1998) for Japanese, and by Park (1997) and Kim (1999) for Korean. This body of work shows that the relevant Japanese and Korean data display a range of traits which are either inconsistent with the behavior of English VPE, or which cannot be accounted for syntactically under a VPE treatment. Taken together, these results combine to present a strikingly solid case that Japanese and Korean should be treated as having *only* a null argument possibility, and *not* a V-Stranding VPE construction. This conclusion thus provides a point of contrast with the results attained for the core languages of Hebrew, Irish, and Swahili discussed earlier in the chapter.

Chapter 2 thus aims both to demonstrate how one can go about establishing a VP Ellipsis diagnosis in a given language, and, simultaneously, to make the case that such a VPE diagnosis is well-motivated for the languages of Hebrew, Irish, and Swahili. In its discussion of Japanese and Korean, it also provides a case study of data from languages for which applying the diagnostics laid out here results in an argument that VPE *should not* be diagnosed. Instead, a construction distinct

from VP Ellipsis—in this case, positing the existence of independently dropped null arguments—provides the best analysis.

2.3. Task #2: Bringing V-Stranding VPE data to bear on the theory of VP Ellipsis

The second core part of this thesis takes as its point of departure the claim argued for in Chapter 2, namely that Hebrew, Irish, and Swahili have a construction which is best treated as a case of V-Stranding VP Ellipsis. This means, in turn, that V-Stranding VP Ellipsis should be viewed as a bone fide VPE sub-type, involving data which form a natural class with those of the familiar English Aux-Stranding variety. The desideratum, then, is that the V-Stranding data from the core languages treated here be derived in the same basic way as is English VP Ellipsis. The task of arriving at a unified analysis of V-Stranding and Aux-Stranding VPE is thus the main focus of Chapters 3 and 4.

Specifically, these chapters explore the relative treatments given to V-Stranding VPE by the two key competing syntactic analyses of English VP Ellipsis in the literature—analyses which, in some form, have formed the focus of an analytical debate which has endured throughout most of the history of generative ellipsis theory. I argue that the *PF Deletion* view of ellipsis (for English VPE, see e.g. Tancredi 1992, Fox 2000, and Merchant 2001, reaching back to Hankamer and Sag 1976, Sag 1976 and other work), allows a markedly more natural and parsimonious account of V-Stranding VPE data than does the *LF Copying* approach (for English VPE, see e.g. Hardt 1992 et seq. and Lobeck 1992, 1995 et seq., reaching back to earlier treatments by Williams 1977 and others). Given the assumption that V-Stranding VPE and English VPE should receive a unified treatment, this result provides a strong argument in favor of the adoption of a PF Deletion approach—and against adopting LF Copying—for VP Ellipsis as a whole, and perhaps for ellipsis in general.

Arriving at this result involves addressing two main questions, each of which forms the respective focus of Chapters 3 and 4: the first involves the position and phonetically overt nature of the target-clause main V, and the second involves the identity requirements between this V and its antecedent-clause counterpart. As laid out in Chapter 3's discussion of the V-Stranding effect, the PF Deletion view requires the target clause VP of V-Stranding VPE to be base-generated with fully fleshed-out internal syntactic structure; the VP is then deleted or not pronounced at PF, so long as certain semantic parallelism and identity constraints between the antecedent and target VPs are satisfied. Here, then, the target clause main V can be base-generated internal to the VP, just as in ordinary non-ellipsis examples. The V will subsequently raise out of the VP at some point prior to that at which the ellipsis effect takes place, allowing a derivation much like that of English VPE, with the addition just of the fact of main V raising to Infl.

In contrast, the LF Copying approach base-generates the target clause's superficially null VP *without* internal structure—often, as in the work of Hardt and Lobeck, as a null proform element—which then receives its interpretation via the copying in of its antecedent VP's representation at LF. This means that the superficially *overt* target clause main V must be base-generated *outside* the null VP. Under LF Copying, then, the basic structure of V-Stranding VPE target clauses in a given language will be quite different from that of non-VPE examples in the same language, with the main V generated *internal* to the VP (under normal assumptions) for the non-ellipsis cases, but *external* to the VP in ellipsis cases.

In Chapter 4, each of PF Deletion and LF Copying are then considered with respect to the question of what the semantic isomorphism requirements are which hold between the antecedent and target clauses of V-Stranding VPE, with respect to the main V of each. The question which arises

at this point is whether this main V is *interpreted* in this VP-external position as well. Although the semantic effects of verbal head movement are not easily probed, it turns out that V-Stranding VPE provides a way to do just this. On the one hand, it is possible that the raised main Vs of the antecedent and target clauses *are* part of what must be isomorphic between the antecedent and target VPs; this situation is tacitly true for English VPE, given that the target-clause main V there is necessarily null, and so is necessarily understood as identical to the antecedent-clause main V:

(6) Leila might like to wear hats, and Madeline might [~~like to wear hats~~] too.

Examples like (6) are only licit when the null VP of the target clause is interpreted as having the same core meaning as that of its antecedent clause. Were the Vs of these VPs to be non-identical (with the exception just of certain allowable differences in the *inflection* of the two Vs, as has been known since at least Sag (1976)), the example would be illicit, because there would be no way to recover the different meaning of the target-clause main V as opposed to the antecedent V:

(7) *Leila might like to wear hats, and/but Madeline might [~~hate to wear hats~~] (too).

For *V-Stranding* VPE, in contrast, it is an *a priori* possibility that the main Vs of the two clauses might *not* need to be the same, since *both* Vs are overt. Were this to be the case, the VP-external surface position of the antecedent- and target-clause Vs would essentially have not only *phonetic* import, but *semantic* import as well. This is an empirical question, the result of which requires resolution in order for an analysis of V-Stranding VPE structures to be developed: it is essential to know whether the account adopted needs to include or exclude the main Vs of the two clauses in the material which it holds parallel. Claims that V-Stranding VPE does or does not require such verbal identity have been made at various points in recent literature (see e.g., respectively, Doron 1990, and Potsdam 1997 versus Otani and Whitman 1991, Lasnik 1997, and Doron 1999),

but each such extant claim involves data which are either ambiguous between null object and V-Stranding VPE analyses, or otherwise involve languages in which a clear V-Stranding VPE analysis has yet to be established.

In answering this question, Chapter 4 presents a novel empirical paradigm from Hebrew. As a Semitic language which is now (given the results of Chapter 2) been established as a clear V-Stranding VPE language, Hebrew is an especially good choice for investigating the question. This is because its rich derivational morphology—instantiated as its conjugation paradigms known as *binyanim*—allows various senses of verbal identity to be probed. The result in Hebrew turns out to be that the main Vs of the antecedent- and target-clauses must be identical in *both* their root *and* in their derivational morphology. V-Stranding VPE is thus ungrammatical when both the root and binyan of the two Vs differ, when the roots differ but the binyan is held constant, and when the binyanim differ but the roots are held constant. Just as is true of English VPE, however, the *inflection* of the two Vs—which, in Hebrew, will be either or both of tense and subject-V agreement—*may* vary. (8-10) provide illustrative examples:[4]

[4]Efforts were made when working with native speakers to ensure that the pragmatics of these examples were *not* responsible for the ungrammaticality observed. In addition, note that, in the case of non-identical binyanim in examples like (9), the argument structure of the antecedent and target VPs necessarily changes as well. In this example, for instance, the antecedent VP has a single internal argument, the dative *le-Tel Aviv* 'to Tel Aviv', while the target VP includes the meaning of an additional accusative *'ota* 'her'. As noted in Chapter 4, this is clearly part of what is responsible for the ungrammaticality of such examples, along with the binyan mismatch.

On a larger level, all data in this thesis which are not attributed to an explicit source were gathered in my own work with native speakers of the language, all of whom spoke Hebrew as their primary language through at least graduation from high school, and most of whom were aged in their early 20s during the time of my work with them. Though all resided in Canada at the time of this work, a majority (A) had been living outside Israel for no more than a few years, and (B) continued to speak Hebrew in some aspects of their daily lives. My work with the data involved has also been facilitated by the following particularly helpful reference works on Modern Hebrew: Donnet-Guez (1995), Bolozky (1996), Dahan (1997), and Doniach and Kahane (1996).

Hebrew: *VPE with Same V Binyan (*hif'il* Causative), Different V Roots (Antec Nun-Samex-Ayin, Target Bet-Aleph)

(8) Q: Rivka hisi'a otax le-beit ha-sefer?
Rivka drive[Past3Fsg] ACC.you[Fsg] to-house the-book
'(Did) Rivka drive you to school?'

A: (Ken,) hi *hevi'a / ✓hisi'a.
yes she bring[Past3Fsg] drive[Past3Fsg]
'(Yes,) she *brought/✓drove [~~me to school~~].'
(cf. English 'Yes, she brought me.')

Hebrew: *VPE with Same V Roots (Nun-Samex-Ayin), Different V Binyanim (Antec *pa'al* Simple, Target *hif'il* Causative)

(9) Q: Li'ora nas'a etmol le-Tel Aviv?
Liora travel[Past3Fsg] yesterday to-Tel Aviv
'(Did) Liora travel yesterday to Tel Aviv?'

A: *Ken— hisa'ti *(ota).
yes drove[Past1sg] ACC.her
'Yes—I drove (lit. 'caused to travel') <~~her yesterday to Tel Aviv~~>.'
(cf. English 'Yes—I drove her.')

Hebrew: ✓VPE with Same V Root and Binyan, Different Tense and Subject-V Inflection

(10) Q: Tazmini et Dvora la-mesiba?
invite[Fut2Fsg] ACC Dvora to.the-party
'(Will) (you) invite Dvora to the party?'

A: Kvar hizmanti.
already invite[Past1sg]
'(I) already invited [~~Dvora to the party~~].'

Facts parallel to those presented here for Hebrew hold in Irish V-Stranding VPE as well, and the requirement also holds—if uninterestingly—for the overt versus null antecedent-target V pairs of English VPE. In all three, then, the inflection of the antecedent- and target-clause main Vs may generally vary licitly, but the actual V roots and their derivational morphology may not. I term this generalization the *Verbal Identity Requirement*, and hypothesize that it is a cross-linguistic trait of the VP Ellipsis construction.

Although the effects of the Verbal Identity Requirement in English are captured under either a PF Deletion or an LF Copying account, its effects in V-Stranding VPE turn out to have significant consequences for the relative success of the two lines of analysis. Under PF Deletion, parallelism and identity between the antecedent and target VPs is achieved via a set of constraints which must hold of the two VPs' LFs in order for deletion or nonpronunciation of the target VP to be allowed (or for such omission of the phonetic content of these VPs not to cause the derivation to crash). Generalizing over the various instantiations of this line of analysis, these isomorphism constraints can be taken to require essentially—modulo certain focus effects—mutual entailment between the antecedent and target VPs, once these VPs are type-shifted to a proposition via a process such as Existential Type Shifting, as in Schwarzschild (1999).

I argue that the facts of Verbal Identity in V-Stranding VPE will be captured under this conception of PF Deletion accounts, so long as the main Vs of V Raising languages are interpreted *internal* to the VP. When this is true, the semantic content of these Vs—including their derivational morphology, but crucially not their inflection—will be correctly held identical as part of the semantic mutual entailment requirement already needed to capture the facts of English VPE. This can be done either by relegating the V-to-Infl movement of such Vs to PF (as in many recent proposals; see e.g. Chomsky 1995, 2000, 2001; Boeckx and Stjepanovic 2001), or, as I argue here, via obligatory reconstruction of Vs to their base, VP-internal position, at LF. This, then, is the only additional assumption which must be added to the mechanisms already in place under PF Deletion to capture the facts of V-Stranding VPE along with those of English VPE.

Part of the fundamental difference in approach between PF Deletion and LF Copying lies in how the two enforce semantic isomorphism between ellipsis antecedent and target clauses. For LF

Copying, such identity comes as a natural result of the copying mechanism itself: the target VP has no inherent content, and receives this content only via the copying in of the semantic representation of the antecedent VP. What is needed in order for such copying to capture the Verbal Identity Requirement of V-Stranding VPE is thus for the antecedent main V to be part of the semantic material copied into the target clause.

It might seem initially that this could be achieved using the same treatments just described for PF Deletion—namely, by either relegating the movement of the antecedent main V to PF, so that it lies internal to the VP prior to and into LF, or by raising this V prior to LF, but then reconstructing it back into the VP at LF. However, this does not work as straightforwardly for LF Copying. As described above, it is necessary under LF Copying to base-generate this target V external to the VP, in a (sub-)head of Infl, in order to capture the fact of its phonetic overtness in V-Stranding VPE target clauses. If the *antecedent clause* VP's representation is then copied into the null VP of the target clause at LF, the *target clause's* distinct VP-*external* main V, lying in Infl, would presumably then need to be linked up with the newly copied-in VP-*internal* main V from the antecedent clause.

At this point, added difficulties for LF Copying ensue. Although identity in interpretation between the antecedent and target clause VPs should already have been taken care of via just the LF-copying act itself, we see that the Verbal Identity issue still needs to be dealt with. Specifically, capturing the facts of the Verbal Identity Requirement requires that the overt, base-generated main V in *Infl* of the target clause be held semantically isomorphic to the newly copied-in *VP-internal* main V from the antecedent clause. This will require a new mechanism—one which, on the most workable assumptions, will essentially replicate the isomorphism constraints of the PF Deletion approach in a way specific to the antecedent- and target-clause main Vs specifically.

The need for this additional isomorphism constraint, however, is more than just a mere stipulation required to make the account work. The most fundamental claim of the LF Copying approach is that the target VP of ellipsis has no internal structure or inherent content, and that it receives this content *entirely* from its antecedent VP. In order to allow LF Copying to extend its range to encompass V-Stranding as well as English VPE, however, we see that LF Copying must be modified to *also* incorporate the semantic isomorphism constraints which hold between material of the antecedent and target VPs within the PF Deletion account—*over and above* the copying mechanism already in place, which on its own was intended to achieve the entirety of such isomorphism requirements.

For these reasons, then, the contents of Chapters 3 and 4 argue that LF Copying be rejected as a viable way in which to capture the facts of both the Aux-Stranding VPE of English, and of the V-Stranding VPE varieties outside English—arguing instead that PF Deletion provides a superior account. PF Deletion is seen to capture the full range of facts from V-Stranding VPE straightforwardly, using just the mechanisms already in place to treat English VPE, and with just the additional reasonable assumption that raised Vs which are pronounced external to the VP are nonetheless interpreted in their base position, internal to the VP.

LF Copying, in marked contrast, requires modification of the phrase structure of V-Stranding VPE target clauses in anomalous ways, and has the same need as PF Deletion to interpret raised main Vs internal to the VP. Even with such assumptions, LF Copying cannot capture the Verbal Identity Requirement of V-Stranding VPE without adopting the same sorts of semantic comparison metrics between the antecedent and target clauses which are already needed under the PF Deletion approach—metrics whose presence, when taken seriously, undermines the basic spirit and

fundamental tenets of LF Copying.

Chapter 5 of the thesis, finally, presents a summary and concluding remarks. This includes a discussion of those issues which, it seems to me, present the most interesting next steps which future research might take. It also mentions the references of which I am presently aware which posit that VP Ellipsis exists in other languages which could not be discussed here: Brazilian Portuguese, Serbo-Croatian, Russian, Finnish, Hungarian, Basque, Mandarin Chinese, and Tagalog. Among the sixteen languages outside English for which I am aware of VPE claims having been made, I take the VPE claims for data in the eight languages just listed to be neither conclusively motivated nor conclusively refuted at this point, and thus in need of further work toward a clear diagnosis.

3. On the Motivation for Integrating V-Stranding VP Ellipsis Data into (VP) Ellipsis Theory

Before moving on to Chapter 2, I would like to conclude this introduction by providing some initial discussion of what I see as the underlying motivation for undertaking the present study. The compelling nature of this motivation will hopefully become increasingly clear to the reader as the thesis proceeds.

As far as I am aware, the work which has been done to date on VP Ellipsis can be considered to fall into one of two distinct groups. On the one hand, a prolific literature on the analytic treatment or derivation of what has become an established set of English VP Ellipsis data has spanned nearly the entire history of generative grammar itself. This includes early work in the 1970s, by Sag, Williams, Postal, Hankamer, and many others, on the construction's basic traits, and on the debate between a deletion versus pronominal analysis. Discussions in the 1980s and early 1990s, principally by Lobeck, Zagona, and Chao, expanded the early, seminal work on the construction, focusing at this

point on the null VP's need to be properly governed by an inflectional head.

Work then begun in the early 1990s, and still continuing at present, has involved research by Tancredi, Rooth, Fox, and Merchant, among others, on correlations with phonological deaccenting, and on how these relate to the parallelism and identity constraints which hold between the antecedent- and target-clauses. Work on LF Copying approaches has also continued, as in work by Hardt (1992 et seq.), Frazier and Clifton (2001), and others.

Beginning roughly in the early 1990s, a parallel body of work has developed which has claimed that VP Ellipsis exists in languages outside English as well, but that such non-English instantiations involve the main V obligatorily remaining overt.[5] A good portion of this work, however, has yet to be accessed or discussed by much of the larger linguistic community so far; this sense is culled from my own personal communication with other linguists, as well as from my reading of the literature on VP Ellipsis theory described just above.

This body of work was begun in an early manuscript by Doron (1990) on Hebrew, in work by McCloskey (1991) on Irish, by Laka (1990) on Basque, and by Otani and Whitman (1991) on Japanese, Korean, and Chinese (with suggestions made as well for 'Portuguese', without reference to a particular dialect). The basic notion that VPE of a V-Stranding variety might exist outside English may have its origins in earlier discussions by Huang (1987b, 1988, 1991) and by Chao (1987).

[5]As discussed in the concluding Chapter 5, a complementary set of non-English VP Ellipsis claims also exists (for languages like Mandarin Chinese, Moroccan Arabic, and Serbo-Croatian) involving an *Aux-Stranding* variety of the construction. Although these data are not the focus of the present study, the diagnostics laid out in Chapter 2 will, on the whole, be directly applicable to the question of whether or not they ultimately constitute cases of VPE.

Such work, then—though also pursuing an analytically-oriented goal[6]—can be contrasted with the body of work on English VPE just described in being concerned principally with establishing whether or not certain non-English data might be able to be analyzed as forming a natural class with the established set of English VPE data.

Since this initial research, claims that V-Stranding VP Ellipsis exists have subsequently been made for Spanish and Italian (López 1994 and subsequent work), European Portuguese (Martins 1994, 2000), the Southern Bantu languages Swahili and Ndendeule (Ngonyani 1996a,b, 1998), Serbo-Croatian (StjepanoviÚ 1997a,b and subsequent work), Russian (with cursory discussion of Polish and Czech as well; McShane 2000), Finnish (Holmberg 1999, 2001), Hungarian (Bánréti 1994, 2001, Bartos 2000, 2001; Gyuris 2001), and Tagalog (Richards 2002).

Further work on the initial languages for which the construction was first claimed to exist has continued during this time as well, including some work which has argued against a VPE analysis for the data at issue in certain languages (as in Hoji 1995, 1998, Tomioka 1998, and Oku 1998 for Japanese; Park 1997 and Kim 1999 for Korean; and Depiante 2000, 2001 for Spanish). For other languages, subsequent research has worked to further substantiate the initial claim that VPE is instantiated (as for Hebrew, e.g. Ussushkin/Sherman 1997, Doron 1999, Goldberg 1998, 2002a,b; and for Irish, e.g. McCloskey 1995).

These two lines of analysis—one developing and debating the derivational treatment of English VPE, and a second investigating the tenability of VPE diagnoses for languages outside English—have developed in tandem, but with no significant intersection, throughout the 1990s and to the present.

[6]In this body of work, the argument that V-Stranding VPE exists in the particular language being studied is often used as part of a larger theoretical proposal that the main V lies in a suitably high position within the language's phrase structural architecture to escape the elision of its verb phrase.

This is understandable from both sides of the picture. From the standpoint of research on VP Ellipsis outside English, it has long been assumed that VP Ellipsis is a construction relegated solely to English—due, presumably, to the cross-linguistic rarity of its sort of auxiliary V system, in which tense and aspect are commonly marked on words distinct from the main V. Thus, since the possibility of *V-stranding* VP Ellipsis in V Raising languages had not been established or considered previously, the 1990s literature cited above on this construction has, quite rightly, focused just on arguing that the data at issue do indeed instantiate VP Ellipsis, having the same core empirical traits as the English construction.

From the opposite perspective, it is equally reasonable that the literature on the derivation and isomorphism requirements of VP Ellipsis has excluded such non-English data from consideration during this time. As alluded to above, some of the claims positing non-English VPE in certain languages have seemed lacking in full motivation, thus being in need of further study to arrive at a more conclusive diagnosis. It would be wrong to essentially contaminate the theory of VP Ellipsis by expanding it too hastily to encompass data which might not, in fact, form a natural class with the established data from English.

For these and other reasons, then, such work often mentions non-English V-Stranding VPE only in a footnote or an aside, usually citing only the work of McCloskey and/or Doron. Moreover, almost without exception, such data are not incorporated into the core examples treated in the main text (see e.g. Fiengo and May 1994:p.18, fn.148, and p.161, fn.23; Lobeck 1999:p.19, fn.14; Merchant 2001:p.71; and Johnson 2001:p.175, fn.11). Further, much of the work on VP Ellipsis outside English has not been widely distributed, and so is likely not to have been available to researchers focusing on the types of analytical issues which have been explored for English VP

Ellipsis.

Nonetheless, it has always been a mystery why VP Ellipsis should be such a robust trait of English, but should be entirely absent in other languages. This is all the more true given that other types of null anaphora—including Sluicing, Gapping, and Stripping (also known as Bare Argument Ellipsis)—seem to be attested in nearly every language which has been studied. The main contribution of this thesis in this light, then—and particularly in terms of the content of Chapter 2—might thus be seen as helping to bring out the fact that we do appear to be making progress on solving this mystery. It is my hope that the present content may aid future research in helping to add other V-Raising languages to the natural class of VP Ellipsis languages of English, Hebrew, Irish, and Swahili which emerges here.

Chapter 2

Establishing a Diagnosis of V-Stranding VP Ellipsis

0. Introduction and Chapter Overview

This chapter focuses on the issue of how to achieve a diagnosis of V-Stranding VP Ellipsis. The approach taken here is that it is reasonable to diagnose VPE for putative V-Stranding VPE data when two principal tasks have been accomplished. First, it should be established that the data cannot be analyzed alternatively as other imaginable types of null anaphora, such as Stripping (Bare Argument Ellipsis), Gapping, Null Complement Anaphora, or, especially, as a string of one or more individually elided null arguments.

Second, it should be established that the data display those key behavioral traits of English VPE that this thesis argues are diagnostics of VPE in general. Such traits include the ability for the target clause to appear within one or more levels of sentential embedding, to appear within a syntactic island (where the antecedent clause lies outside this island), and to appear within just one conjunct of a coordinate structure (where, again, the antecedent clause lies outside the entire coordinated structure).

For the core languages under consideration in this thesis—Irish, Swahili, and Hebrew—this diagnostic work of both steps has already been carried out in relatively complete fashion, and such work will be outlined briefly in Section 1 of this chapter. However, there is one significant exception to this in the extant literature on particularly Hebrew and Irish—and this concerns the question of analyzing such data as the product of one or more independently elided null arguments. Careful demonstration that this remaining alternative analysis is not possible for the data claimed

to involve VPE in each of these languages is thus the concern of the bulk of this chapter.

Such ambiguity between a null argument and V-Stranding VPE analysis has been a persistently under-recognized problem which has plagued the literature on V-Stranding VP Ellipsis (and literature on null objects as well). Most typically, the specific ambiguity in the putative V-Stranding VPE data is with a null direct object, since transitive Vs are often used in the examples involved. Such surface-string ambiguity is not an issue for *English* VP Ellipsis, since its main V necessarily elides—something which would not happen in a null argument structure.

For languages such as those considered here, however, the main V lies overt within Infl—the inflectional domain of the sentence—so that surface-strings in which all VP-internal constituents are null are inherently ambiguous between a V-Stranding VP Ellipsis analysis, and an alternative analysis in which the VP remains intact, but each of its internal constituents has dropped independently. A principal focus of the present chapter will thus be on how to develop and use control methods for null arguments in putative V-Stranding VPE data. As discussion of this proceeds through the issues specific to each of Hebrew, Swahili, and Irish, we will see essentially three case studies of languages for which a diagnosis of V-Stranding VPE (as opposed to one positing null arguments or sorts of null anaphora) turns out to offer the best characterization available for a given set of data.

This chapter is organized as follows. Section 1 gives an overview of diagnostic tests other than those involving null arguments to be used in determining the presence of VP Ellipsis. Section 2 then turns to the null argument-VPE ambiguity problem, laying out the details of how such ambiguity arises, and accompanying these with initial steps which can be taken to rule out a null argument analysis for putative VP Ellipsis examples in any given language. Sections 3 through 5

then show how this can be done for the core languages focused upon in this thesis, crucially employing independent properties of the particular language in each case.

Specifically, Section 3 presents the results of my own previous work on Hebrew (Goldberg 2002a,b), in which it is shown that, while Hebrew—like Swahili and Ndendeule—does have a null direct object construction, it is restricted just to those direct objects which are *inanimate*. Further, it is shown that VP-internal elements besides the direct object are not able to elide independently (i.e. without *all* VP-internal elements eliding) in this language. Putative Hebrew VPE examples are thus shown not to be able to be analyzed alternatively as cases of Null Objects, since such VPE examples can elide not only the direct object, but additional internal arguments as well, *including* those direct objects which are animate. Thus, the use of animate direct objects, as well as of VPs in which the direct object is not the sole internal argument, can be employed to rule out a Null Object analysis for putative VP Ellipsis examples in the language.

Section 4 discusses this issue for Swahili and Ndendeule, using the results of the careful work of Ngonyani (1996a, 1998) for these languages, which unfortunately has not yet received wide distribution. We see in section 4 that, like Hebrew, Swahili and Ndendeule do allow direct objects to surface independently as null, with other VP-internal elements overt, but do not allow this for other VP-internal elements. For these languages, Ngonyani's work shows that such Null Objects in these languages are licit only when accompanied by an object-agreement morpheme which appears on the V. Grammatical examples in these languages in which all VP-internal material surfaces as null, however, lack this object-agreement morpheme. This, along with the ability of a wide range of verbal argument sequences to elide—including both the applied and direct object of applicative constructions, the causee and lower object of causative constructions, and infinitival complements,

none of which correspond to an extant object-agreement morpheme—definitively rules out a null object treatment for the putative VP Ellipsis examples in these languages. Thus, constructing examples in these languages in which an object-V agreement morpheme is not present will provide a way to rule out a Null Object analysis when testing putative instances of VPE.

Section 5 then discusses the case of Irish. Although McCloskey (1991, 1995) did not explicitly rule out a null argument analysis for the data which he argued to instantiate V-Stranding VPE, I show here that such data cannot be analyzed alternatively as involving independently elided arguments within an intact VP. The basic sentential order in finite clauses is VSO in Irish, and the subject of such clauses has been argued extensively by McCloskey to remain internal to the verb-phrasal domain in surface representations. It is shown here that, from what is already known about Irish syntax, some arguments may elide in this language, but only in the presence of agreement morphology on a verbal, P, or N head.

Since Irish Vs do not agree with direct objects, such objects are not able to surface independently as null. Further, the verbal paradigms of the language are typically mixed between V forms standardly referred to as 'synthetic', which bear subject-agreement morphology and so allow (and in fact require) null subjects, and V forms standardly referred to as 'analytic', which do not show agreement with the subject, and so require that their subject be overt. Therefore, putative VPE examples in this language in which the direct object elides, as well as those in which a VP-internal null subject is accompanied by *analytic* V forms which lack subject-agreement, cannot be cases of independently elided VP-internal direct objects or subjects. In turn, using such examples when testing V-Stranding VPE in this language will rule out the possibility of an alternative null argument analysis.

Finally, Section 6 presents a case study of a set of data from the literature on Japanese and Korean which, like the data from the core languages discussed earlier in the chapter, are again ambiguous between a null argument and V-Stranding VPE analysis. Unlike the earlier core cases, however, the Japanese and Korean data are best analyzed as involving one or more individually elided null arguments, and *not* as V-Stranding VPE. This section thus provides a compilation of arguments to this effect—many of which come from work which has gone unnoticed in much recent literature.

Section 7 then closes the chapter with some concluding remarks.

1. A First Consideration of VPE Diagnostics

Because the presence of VP Ellipsis has not previously been explored outside the first language in which it was observed (namely English), we have lacked a set of established diagnostics for the phenomenon—contrasting with the situation for e.g. unaccusativity, negative polarity, and so on. It can nonetheless be noted that English VP Ellipsis has a characteristic set of behavioral traits, the confluence of which is not found in other types of null anaphora. In beginning to consider putative V-Stranding VPE data, then, it is reasonable to posit that a majority of the traits characteristic of English VPE should hold of the putative V-Stranding VPE data as well, and further that none of the traits should be absent without a clear reason adduced from independent factors.

1.1. Licensing by an inflectional head

English VP Ellipsis is most easily distinguished from other types of ellipsis in the language by its requirement that one or more Auxiliary Vs be overt, while the entire contents of the verb

phrase, including its main V, appear as null:

(1) Bruce fed Colin some yogurt, and Bonnie did [$_{VP}$ ~~feed Colin some yogurt~~] too.

Here, the pleonastic Auxiliary *do* is stranded; modals may also be stranded, as well as instances of perfective *have*, progressive *be*, and passive *be*, with or without the presence of other Auxiliaries or negation, in most cases:

(2) Mikael had arrived by noon, but Hiro hadn't [$_{VP}$ ~~arrived by noon~~].

(3) Joey is/might be bringing spanikopita to the party, but Becca isn't/might not be [$_{VP}$ ~~bringing spanikopita to the party~~].

(4) The mushrooms were (being) fried up by Laurie, and the artichokes were [$_{VP}$ ~~(being) fried up by Laurie~~] too.

Some restrictions do hold for English VPE in terms of what may licitly serve as the stranded element preceeding the null VP, concerning especially instances of *be*, of nonfinite *to*, and of negation; see e.g. Johnson (2001) for a recent review of some of the relevant issues and references.

I will abstract away from some of the finer details of this generalization for English VPE here, keeping instead to the present focus of using English VP Ellipsis as a source of comparison for claims of VPE in other languages. What *is* crucial for this purpose is that the various accounts for such facts converge in the sense of accounting for this fact by implementing formally the generalization that the null VP of VP Ellipsis (as well as the null IP and NP of Sluicing and NP Ellipsis, as described below) must occur in the presence of an inflection-bearing head located in the Infl domain. Thus, all such accounts work to rule out ungrammatical examples of English VPE like the following, which contrast with the licit sentences of (1-4) above in lacking the presence of such a head: in (5), inflection lies on the main V, which is not in Infl, and is, furthermore, elided; in (6), the stranded nonfinite *be* which (presumably) lies in Infl does not bear tense or agreement; and, in

(7), the inflected main V is left overt, but, given that this is English, does not lie in Infl:[1]

(5) *The administration recommends that the teachers arrive on time, and that the students [$_{VP}$ ~~arrive on time~~] too. *(Lobeck 1999:ex.48b)*

(6) The company asks that employees be finished with lunch by 2pm.
...*The company recommends that they <u>be</u> [$_{VP}$ ~~finished with lunch by 2pm~~] in order to be back on the job by 2:05. *(Lobeck 1999:ex.49)*

(7) *Before John <u>started</u> [$_{VP}$ ~~reading *War and Peace*~~], Mary finished reading *War and Peace*. *(Lobeck 1999:ex.42a)*

Let us first discuss the various formulations of this licensing requirement, and then consider its general implications for V-Stranding VP Ellipsis.

Initial accounts for this generalization by Zagona (1982, 1988a,b), Lobeck (e.g. 1986a,b, 1991, 1992, 1995), and Chao (1987) (see also Contreras 1989 for what I will refer to as NP Ellipsis, known previously as 'N-bar Deletion') appeared within a Government and Binding framework. This body of research has generally proposed that the elided material of VP Ellipsis, Sluicing, and NP Ellipsis[2] (which have been motivated extensively to form a natural class among the ellipsis constructions; see especially Lobeck 1991 and 1995, as well as Chao 1987 and Johnson 2001) must be properly governed by an inflectional head in order to be licensed. Lobeck's (1995) formulation

[1]These examples are constructed so as to rule out other types of ellipsis which are ungrammatical in VPE environments. For instance, the target clause of (5) would be licit as an instance of the distinct construction of Stripping if it were not embedded, and that of (7) be licit as a case of Null Complement Anaphora if it did not precede its antecedent clause in this 'backward ellipsis' configuration.

[2]For readers who may not be familiar with this body of work, Sluicing (first described by Ross 1969) can be characterized as the elision of an IP complement to an interrogative C° head, and NP Ellipsis (under the DP hypothesis of noun phrases) as the elision of an NP complement to a possessive D° head. They are thus like VPE in involving the ellipsis of a constituent which serves as complement to a functional head, but differ from it in necessarily involving a specifier which is filled, as seen in the following respective examples:

<u>Sluicing</u>:

(i) [$_{CP}$ [$_{IP\text{-}ANTEC}$ That squirrel just ate something]], but I don't know [$_{CP}$ what/where/why [$_{IP}$ ~~that squirrel just ate (it)~~]].

<u>NP Ellipsis</u>:

(ii) Henry remembered to bring [$_{DP}$ his own [$_{NP\text{-}ANTEC}$ jacket]], but I had to borrow [$_{DP}$ Robey's [$_{NP}$ ~~jacket~~]].

is widely cited, and is given as follows:[3]

(8) **Licensing and Identification of *pro***: (Lobeck 1995:20)
An empty, non-arbitrary pronominal must be properly head-governed, and governed by an X° specified for strong agreement.

The null constituent in each of the three ellipsis constructions is argued by Lobeck, Zagona, and Chao (as well as by Hardt, e.g. 1992, 1993) to involve a non-arbitrary null pronominal element, which I will refer to as *pro* for present purposes. The requirement given is therefore characterized in terms of the licensing of *null pronominal* elements. Being "specified for strong agreement" in Lobeck's terms means that the X° head—or a head with which it agrees—shows overt morphological agreement (thus realizing features which it shares with those of another head or phrase under government) in a productive number of cases. The requirement, under this view, will thus ensure that the null VP, NP, and IP of each construction will be properly governed by an agreeing Infl, D, or C head, respectively. For VP Ellipsis, Lobeck proposes that the relevant type of agreement feature at issue is [+tense], which will be realized on a verbal head, but is initially located on a sub-head of Infl.

Various Minimalism-consistent reconceptions of this inflectional licensing constraint are possible which avoid the notion of government and thus of proper government (see e.g. Merchant 2001:60-61, 2004; Potsdam 1998:77). The core insight from all such formulations, however, is what is important here: VP Ellipsis is considered to be licensed only when it occurs in the presence of a local, tense-inflected head. As we will see below, this trait crucially distinguishes VPE from other anaphoric constructions involving null material, such as Gapping and Stripping.

[3]This final version of Lobeck's (1995) licensing requirement is first given, to my knowledge, on page 20 of that work. However, the formulation is repeated verbatim several times throughout the book, including on page 52—which is the page reference given to it in Lobeck (1999).

Further, this inflectional licensing constraint makes the prediction that V Raising languages fit in to the paradigmatic requirements shown for English VPE. This is so because the licensing inflectional head is not restricted to being an Auxiliary V, leaving open the possibility that the raised *main V* of a V Raising language might fill the same licensing role as Lobeck captured for English Auxiliary Vs.

1.2. Additional traits characteristic of English VPE

Apart from the question of what is stranded in the target clause, a variety of other traits can be noted to distinguish English VPE from other types of null anaphora. First, unlike a construction such as Null Complement Anaphora—which, though it strands a main V, only elides constituents which express a proposition—English VPE is grammatical regardless of the internal content of the VP which elides:

VP Ellipsis

(9) Q: a. ✓Did Heather know that Cinema du Parc had opened?
b. ✓Did Heather see Seonaid?
c. ✓Did Heather walk to the department?
d. ✓Did Heather send the bagels over to Naoko's?
e. ✓Did Heather put the bagels on the counter?
f. ✓Did Heather tell you that Jupiter Room is open?
g. ✓Did Heather tell you to come over?

A: She did.

(Putative) Null Complement Anaphora

(10) Q: Does Heather know that Cinema du Parc is open?
A: ✓She knows.

(11) Q: Does Heather see Seonaid?
A: *She sees.

Additional behavioral traits of English VPE include the ability of the target clause to appear

within a syntactic island (of which the antecedent clause lies outside), within just one conjunct of a non-across-the-board coordinate structure (again with the antecedent clause lying entirely outside the coordinated structure)—both of which are impossible for null arguments involving movement dependencies—and, especially, the ability for the target clause to appear licitly within one or more levels of sentential embedding. Systematic grammaticality across *all* such environments—combined with a freedom to appear in a range of discourse environments without being relegated, for example, just to coordinate structures or question-answer pairs—is a distinguishing factor between English VP Ellipsis, on the one hand, and other null anaphora constructions like Stripping, involving the stranding of just a single element (generally a constituent) in the target clause which has a counterpart in the antecedent clause, and Gapping, in which two such elements are stranded:

Gapping

(12) Ingrid had french toast for brunch, and Alan ~~had~~ an omelette ~~for brunch~~.

(13) Sadie went to Miami, and Naoko ~~went~~ to Jupiter Room.

Stripping

(14) Speaker A: Ingrid decided to order french toast at brunch.
Speaker B: Yeah, Alan ~~decided to order french toast at brunch~~ too.

Target Clause within Sentential Embedding

*Gapping:

(15) *Ingrid had french toast for brunch, and Corrine thinks [$_{CP1}$ that Naoko said [$_{CP2}$ that Alan ~~had~~ the pancakes ~~for brunch~~]].

*Stripping:

(16) Speaker A: Ingrid decided to order french toast at brunch.
Speaker B: *Yeah, and Corrine thinks [$_{CP1}$ (that) Naoko said [$_{CP2}$ (that) Alan ~~decided to order french toast at brunch~~]] too.

✓ VP Ellipsis:

(17) Corrine made it to Beauty's early, and Ingrid thinks [$_{CP1}$ (that) Naoko said [$_{CP2}$ (that) Alan would [~~make it to Beauty's early~~]]]] too.

Target Clause within an Island

*Gapping:

(18) *Sadie put the jam out on the table [$_{\text{Adjunct Island}}$ before Heather ~~put~~ the butter ~~out on the table~~].

✓ VP Ellipsis:

(19) Q: Did Sadie put the jam out on the table?
A: Yes, and she left [$_{\text{Adjunct Island}}$ after she did [~~put the jam out on the table~~]].

Additional traits which are characteristic of English VPE include grammaticality in backward ellipsis so long as the Backward Anaphora Constraint of e.g. Langacker (1969) is respected, and the ability, in appropriate environments, to give rise to Antecedent-Contained Deletion (ACD) structures and sloppy as well as strict identity readings.[4]

For V-Stranding VPE in Hebrew, Irish, and Swahili, the evidence establishing that these traits hold has on the whole already been reported in the literature. Rather than repeating the full set of data here, I refer the reader to the original sources: for Hebrew, see Doron (1990, 1999), Ussushkin/Sherman (1987), Doron (1999), and Goldberg (1998, 2002a,b); for Irish, see McCloskey (1991, 1995); and, for Swahili, see Ngonyani (1996a,b, 1998). I will add to these sets of data just

[4]Putative ACD and backward anaphora configurations involving V-Stranding VPE can each fall prey to ambiguity with other, non-ellipsis analyses in a way that does not arise for English VPE—due to the fact that the latter is immediately recognizable as VPE from the presence of its target-clause stranded Auxiliary V. For ACD, cases in which the only argument within the targeted VP is a direct object will be ambiguous between involving ACD and a simple relative clause, so that the equivalent of English (i), involving the former, and (ii), involving the latter, will be essentially be indistinguishable in V-Stranding languages:

(i) I tried all the pies that Becca did.
(ii) I tried all the pies that Becca tried.

Similarly, without a target-clause main V elided, putative cases of backward anaphora can be ambiguous with a Right Node Raising analysis. This is evidenced by the following putative case of V-Stranding VPE in Hebrew given by Doron (1999), which, as can be seen from its translation, could also be treated as a case not of VPE, but rather of RNR:

(iii) Im ata lo torid, az ani orid et
if you not take.out[Fut2Msg] then I take.out[Fut1sg] ACC
ha-ašpa la-pax.
the-garbage to.the-can
'If you (will) not take out ~~the trash (to the can~~), then I will take out(,) the trash to the can.' *(Doron 1999)*

the following additional examples from Hebrew (gathered from my own work), showing grammaticality within sentential embedding and a syntactic island. To my knowledge, such data have not appeared to date within the literature on Hebrew V-Stranding VPE, with controls in place for the presence of a null object (as will be elucidated in the case study of Hebrew below):[5]

Hebrew VPE: ✓Antecedent Clause (but not Target) embedded

(20) Speaker X: Sara amra še-Yosi hicig et
Sara say[Past3Fsg] that-Yosi introduce[Past3Msg] ACC

ha-talmidim lifney ha-mora.
the-students before the-teacher
'Sara said that Yosi introduced the students to the teacher.'

Speaker Y: Lo, ze lo naxon--- ANI hicagti.
no this not true I introduce[Past1sg]
'No, that's not right—- I introduced [~~the students to the teacher~~].'

Hebrew VPE: ✓Target Clause (but not Antecedent) Embedded

(21) Ehud hizmin otanu le-mesiba, ve-ani xoševet še-Dani
Ehud invite[Past3Msg] ACC.us to-party and-I think that-Dani

gam hizmin.
also invite[Past3Msg]
'Ehud invited us to a party, and I think that Dani also invited [~~us to a party~~].'

Hebrew VPE: ✓Antecedent and Target both Embedded

(22) Anaxnu xošvim še-XANA hizmina otanu la-mesiba,
we think[BenMpl] that-Chana invite[Past3Fsg] ACC.us to.the-party

aval Mixa'el xošev še-DAVID hizmin.
but Michael think[BenMsg] that-David invite[Past3Msg]
'We think that CHANA invited us to the party, but Michael thinks that DAVID invited [~~us to the party~~].'

[5]Here and throughout this thesis, elements in SMALL CAPS are pronounced with focal stress.

Hebrew VPE: ✓Target Clause (but not Antecedent) with an Adjunct Island
Context: Shoshana is very excitable, and tends to faint often.

(23) Q: Šošana yoda'at še-hizmant et aba
Shoshana know[BniFsg] that-invite[Past2Fsg] ACC father

šela la-mesiba?
of.her to.the-party
'(Does) Shoshana know that you invited her father to the party?'

A: Lo, hi hit'alpa lifney še-hizmanti.
no she faint[Past3Fsg] before that-invite[Past1sg]
'No, she fainted before (I) invited [~~her father to the party~~].'

In concluding this section, it can be noted that it is true of various other types of constructions or elements which require diagnosis that, as cross-linguistic investigation proceeds, it has often become clear that certain diagnostics need to be modified or are not applicable for certain languages. It thus seems likely that some traits which are currently thought of as being strong characteristics of VPE from what is known of English may turn out to be equally in need of revision or modification, or indeed may turn out to be the result of English-specific traits in a way which was not previously clear.[6] The traits outlined here are thus put forth as just a concrete hypothesis for what a set of VPE diagnostics might be. It is my hope these will be modified and/or amended by future research as a more cross-linguistically accurate profile of VP Ellipsis behavior emerges.

2. The Null Argument Versus VP Ellipsis Ambiguity Problem, and Initial Issues in Controlling for Null Argument Structures

Having presented an initial characterization of the traits of English VP Ellipsis, a majority of which should reasonably be expected to occur for a set of data in any other language which is

[6]The obligatory stranding of one or more Auxiliary Vs in the target clause of VPE would seem to be one such characteristic.

claimed to be an instantiation of VPE, we now move on to consider what has been the most significant diagnostic issue in the literature on non-English VPE: the problem of ambiguity of the data between a V-Stranding VPE and null argument analysis. A general description of why and how this problem arises is laid out in the present section. The ensuing sections of this chapter will then consider how this ambiguity problem can be overcome, via the presentation of four case studies involving sets of languages in which this issue is addressed. In Hebrew, Swahili (and Ndendeule), and Irish, this process results in the finding that a set of data exists which is best analyzed as involving VPE and not one or more null arguments. Japanese and Korean, in contrast, represent a grouping of languages in which this process yields the reverse result, with a null argument analysis emerging as the most successful.

2.1. The problem of ambiguity between a VPE and null argument analysis

The problem of ambiguity between a V-Stranding VP Ellipsis and a null argument analysis occurs for examples such as (24), from Hebrew:

(24) Q: (Ha'im) Tamar kanta kafe?
Q *Tamar* *buy[Past3Fsg]* *coffee*
'(Did) Tamar buy coffee?'

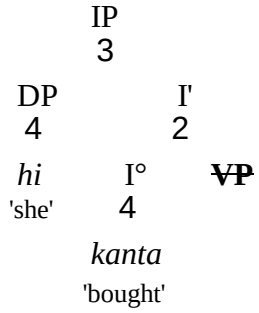
A: Ken, hi kanta.
yes *she* *buy[Past3Fsg]*
'Yes, she bought (~~coffee~~).'

The problem here is that the grammatical Hebrew target clause contains a missing direct object as its sole internal argument. Thus, although this example would be a grammatical instance of a V-Stranding VPE structure, it is also licit as an instance of an elided direct object (henceforth a 'Null Object') in a structure in which the VP has remained intact. These two possible analyses are

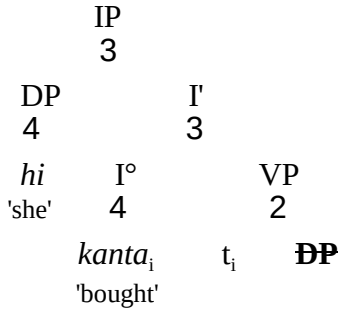
represented schematically in structures in (25) and (26):[7]

Two possible syntactic structures for surface string (24A)

(25) V-Stranding VP Ellipsis:



(26) Null Object:



The ambiguity in analytical possibilities for target clauses like (24A) thus means that such surface strings cannot, on their own, be used to motivate a claim of either a V-Stranding VPE construction or a Null Object construction for a given language. This fact has been noted by numerous authors, including Doron (1990, 1999), in the initial research positing both Null Objects and VP Ellipsis in Hebrew, Raposo (1986), in work on Null Objects in European Portuguese, and Ngonyani's (1996a,b, 1998) work on V-Stranding VPE in Swahili and Ndendeule.

Despite this, such surface strings *have* been used as the key evidence for claims of V-Stranding VPE, as well as for claims of Null Objects, in much of the literature on the two constructions. For instance, as discussed in Goldberg (2002a,b), in Doron's (1990, 1999) work on two constructions in Hebrew, every example given as a case of V-Stranding VP Ellipsis—and a good proportion of the examples given as instantiating Null Objects as well—are ambiguous in this way,

[7]Here and throughout, trees are often simplified, thus not including the full details of the structure for the sake of making the point at hand as clear as possible. In this tree, for instance, the VP will also include the trace of the subject, and so on. Along these lines, the entire inflectional domain is abbreviated as 'IP', and the entire verb phrasal domain, including all of its sub-layers, is abbreviated as 'VP'.

Finally, note that I assume the copy theory of movement throughout this thesis, but will represent non-head positions within chains just as 't' for notational convenience in this chapter and in Chapter 3. In the analytical discussion in Chapter 4, when the precise nature and content of these positions becomes crucial, they will be represented as the actual copies of the chain's head which I assume them to be throughout.

with a missing direct object appearing as the sole internal argument of the VP. This makes it unclear whether behavior claimed to display VPE diagnostics is really indicative of this construction, or, rather, displays the behavior of the language's Null Object construction. Raposo's (1986) null direct object proposal for European Portuguese has similar problems. Thus, some of the supporting data rules out a V-Stranding VPE analysis by using VPs with more than one internal argument, so that the direct object is elided but a second VP-internal argument remains overt. However, as in Doron's work, other examples given by Raposo contained just the null direct object as the main V's sole internal argument.

This ambiguity problem is likely to be a contributing factor to the present situation in the VP Ellipsis literature, in which non-English VPE examples typically remain excluded from the core set of VPE data treated. In making the case here that VP Ellipsis *does* exist in Irish, Hebrew, and Swahili, then—as well as in any future work which aims to make this case for additional languages—a null argument analysis must be systematically ruled out for all data used to substantiate a claim of V-Stranding VP Ellipsis.

2.2. Initial control techniques for null argument structures in V-Stranding VPE examples

In investigating the existence of V-Stranding VP Ellipsis in a given language, then, the first step is to determine whether the language allows any arguments to independently drop—and most crucially, whether this is possible for elements which are argued for the language to lie internal to the verb-phrasal domain at S-Structure. If such productive null argument strategies are generally not found in the language (as the extensive literature on English seems to show for that language), for instance, then it will not be necessary to rule out a null argument analysis for putative VPE data in

the language, even if, for example, a direct object is the only internal argument elided. Instead, all that will remain to establish a V-Stranding VPE diagnosis for the language will be to show the kinds of facts presented for the Irish, Hebrew, and Swahili in the work cited above for these languages—in other words, to show that they display the hallmark traits of VPE, and further that they do not receive a superior analysis as a different type of ellipsis such as Stripping, Gapping, or Null Complement Anaphora.

Each of the core languages treated here, however, *does* allow some sort of VP-internal null argument, as the following sections show. I thus propose that the first step in establishing a V-Stranding VPE diagnosis for these languages is to rule out an alternative analysis involving independently elided null arguments. This move will be necessary when investigating V-Stranding VPE in other languages as well, since VP-internal null argument constructions, especially those which target the direct object (see the vast Null Object literature, including Campos 1986 for Standard Spanish, Suñer and Yépez 1988 for Quito Spanish, Landa and Franco 1995 for Basque and Basque Spanish, Chung 1984 for Chamorro, Cole 1987 for languages including Imbabura Quechua and Thai, Speas 1996 for Navajo, Lillo-Martin 1986 for American Sign Language, and so on). Many such languages with null argument strategies also have V-to-I Raising (which is also a very strongly attested trait cross-linguistically), and thus be candidates for having a V-Stranding VPE construction.

While it is true that many such languages allow some sort of null argument among VP-internal elements, it is also true that such languages often place restrictions on the conditions under which such null arguments are licit. Null Objects, which are the most common type of VP-internal null argument, for example, are often allowed only in the presence of accompanying agreement morphology on the V (as argued for Navajo and Pashto by Speas 1996 and Huang 1984, respectively,

as well by Ngonyani for Swahili and Ndendeule, as discussed below).

Many other languages allow only certain types of direct object DPs to drop. Thus, it has been argued that Standard Spanish (Campos 1986) and Greek and Bulgarian (Dimitriadis 1994) require their Null Objects to be indefinite; Suñer and Yépez (1988) argue that Quito Spanish Null Objects are obligatorily inanimate and masculine, and my own research on Hebrew has shown an inanimacy requirement for Null Objects in Hebrew as well (Goldberg 2002a,b). Other types of Null Objects occurring with certain verb types are argued to be licit only when referentially arbitrary and temporally generic, as in Italian (Rizzi 1986), French (Authier 1992, Roberge 1991), Spanish (Roberge 1991), and Kinande (Authier 1992).

Thus, while it is true that many languages allow some sort of null argument strategy for VP-internal elements—most commonly allowing null direct objects—it is also true that restrictions involving the presence of agreement morphology, or requiring Null Objects to be of a certain sort of DP, are also quite common. Additionally, for the majority of the languages shown to have null direct objects in the literature cited here, it is *not* possible for other VP-internal elements (besides the direct object) to independently surface as null.

Taken together, these two factors can be used to the advantage of the researcher investigating V-Stranding VPE in a given language. Once the first step is taken of identifying which VP-internal arguments may independently drop, and the conditions under which this is possible, putative VPE examples can then be constructed which contain null VP-internal elements which cannot be cases of null arguments—either because that particular element cannot drop independently in the language, or because the element appears as null under conditions in which it is not licit as a null argument. For instance, if direct objects (but not PPs) are established as licit null arguments in the language,

then a null VP in which a PP is elided *along with* a direct object can be used. Similarly, if only indefinite direct objects, or only direct objects with which the V is marked for agreement can drop independently, then Null Object structures can potentially be ruled out by using null VPs in which the direct object is definite, or which contain a direct object with which the V does not agree, as the case may be. If potential V-Stranding VPE examples constructed using this strategy are found to be grammatical in the language, then the researcher can proceed to the additional diagnostic steps laid out in the research cited above for Hebrew, Irish, and Swahili.

Before moving on to carry out this first diagnostic step for the core languages treated here, then, one final point is of note. The reader will notice that I have set this discussion up to suggest that it is possible to rule out a null argument analysis for putative V-Stranding VPE data in a language which allows VP-internal null arguments in the following way. One first discovers what restrictions the language places on its null arguments, both in terms of certain categories which may not drop, as well as in terms of required agreement morphology, or of certain constituent types (e.g. indefinite or arbitrary direct objects). One then constructs putative VPE examples in which such requirements are *not* met—so that agreement morphology is e.g. not present, or in which XPs which may not surface as null arguments independently are elided along with other VP-internal material.

This strategy, then, will encounter obvious problems for a language like Japanese, in which it has long been known that nearly any element in a sentence can licitly drop, under a (sometimes quite minimal) degree of discourse salience. Such languages present a deep problem for this first step of ruling out a null argument analysis in the course of investigating the existence of V-Stranding VPE. This factor, combined with evidence from recent literature that the relevant examples do not display key traits of VP Ellipsis, is used in Section 6 below to argue that V-Stranding VPE should

not be posited for Japanese and Korean.

This noted, we now carry on with the much more workable task of teasing null arguments apart from VPE in the core languages focused upon in this thesis, using the strategy just outlined. Thus, data from Hebrew are addressed in Section 3, Section 4 considers examples from the Southern Bantu languages Swahili and Ndendeule, and Section 5 concludes with a treatment of Irish.

3. Teasing Null Objects Apart from V-Stranding VPE in Hebrew

Main Vs bear all clausal inflection in the majority of Hebrew clauses, and there is evidence that these Vs raise obligatorily into the inflectional domain in overt syntax. The evidence for such raising comes from the standard sorts of diagnostics used in work such as e.g. Pollock (1989) from the placement of VP-edge elements such as manner adverbials and floated quantifiers, all of which standardly *follow* the main V in this language. For Hebrew, proposals of V-to-Infl raising come from work including Doron (1983, 1990, 1999), Shlonsky (1987, 1991, 1997), and Goldberg (2001).[8] Some of the relevant basic examples motivating this analysis are as follows:[9]

Hebrew: VP-Edge Elements Obligatorily *Follow* the Main V, Motivating V-to-Infl Raising

Manner Adverbial:

(27) a. ✓Dani patax be-'adinut et ha-delet.
Dani open[Past3Msg] in-gentleness ACC the-door
'Dani opened gently the door.' *(Shlonsky 1997:ex.1-40b)*

[8]Borer (1995) proposes an alternative view involving optional raising of the main V (and subject), which is argued against extensively, on empirical grounds in an array of Hebrew clause-types, by Goldberg (2001).

[9]The existence of V-Stranding VP Ellipsis in Hebrew, once motivated to exist as a construction which forms a natural class with English VPE, has been used as additional evidence that Hebrew main Vs lie outside the verb-phrasal domain, in contrast with the position of such Vs in English (see e.g. Borer 1995, Goldberg 2001). Since motivating the existence of this construction in Hebrew is crucially at issue in the present discussion, however, VPE facts are, of course, not presented as motivating evidence here.

b. *Dani be-'adinut patax et ha-delet.
Dani in-gentleness open[Past3Msg] ACC the-door
'Dani gently opened the door.' *(Shlonsky 1997:ch.1,fn.22,ex.ib)*

Floated Quantifier:

(28) a. Ha-yeladim katvu kulam mixtav.
the-children[Mpl] write[Past3pl] all[3Mpl] letter
'The children all wrote a letter.' *(Shlonsky 1997:ex.1-10b)*

b. Ha-yeladim yašnu kulam.
the-children[Mpl] sleep[Past3pl] all[3Mpl]
'The children all slept.' *(Shlonsky 1991:ex.15a)*

c. Ha-yeladim nišku šneyhem et Dina.
the-children[Mpl] kiss[Past3pl] both ACC Dina
'The children both kissed Dina'
(Doron 1990&1999:ex.4a, attributed to Anita Mittwoch, p.c.)

Accepting the conclusion that Hebrew main Vs undergo obligatory V-to-Infl raising (i.e. accepting that Hebrew Vs lie within Infl at surface levels), then, initial work within the generative literature on both null direct objects and V-Stranding VP Ellipsis in Hebrew is found in Doron (1990, 1999). Specifically, her work argued that Hebrew has both constructions, and that the two have distinct traits. Hebrew Null Objects, but not V-Stranding VPE, are argued in her account to be ungrammatical when occurring within a syntactic island, and when occurring as part of just one conjunct of a coordinate structure—thus suggesting that the language's Null Objects (but not VPE) display traits of the traces of A-bar extraction. Further, she argues that Hebrew Null Objects allow only “strict” identity readings in relevant contexts, whereas Hebrew VPE examples are ambiguous between “sloppy” and “strict” identity readings in such contexts.

Doron noted first of all that a characteristic trait of the language's V-Stranding VP Ellipsis construction is that it can elide more than one VP-internal element. This is supported with examples such as (29), taken from Doron (1999), in which the elided material includes not only the direct

object, but a goal PP and a time adverbial as well:

Hebrew: Representative V-Stranding VPE Example from Doron's Work

(29) Q: Šalaxt etmol et ha-yeladim le-beit-ha-sefer?
send[Past2Fsg] yesterday ACC the-children to-house-the-book
'Did (you) send [yesterday the children to school] ?'

A: Šalaxti.
send[Past1sg]
'(I) sent [~~yesterday the children to school~~].' *(Doron 1999:ex.13)*

Unfortunately, this work did not make systematic use of VPs in which more than just the direct object elides, or of other factors to control for a Null Object analysis in the remainder of the VPE examples given. Instead, the remainder of the VPE data which she presents, and a good number of the Null Object examples as well, contain VPs in which the sole internal argument is a missing direct object—thus displaying the Null Object versus VPE ambiguity problem discussed in 2.1 above to be common in the literature on each construction.[10] This oversight makes it unclear whether data given to support the traits claimed for one construction might not in fact be showing the traits of the other.

For this reason, the traits of the V-Stranding VPE and Null Object constructions are re-examined in Goldberg (2002a, with more extensive methodological discussion for the same content included in Goldberg 2002b), adapting essentially the strategy laid out in Section 2.2 above to control for each construction when attempting to study the other. Summarizing the results of that study here, we see first that VP-internal constituents other than direct objects cannot elide

[10]For the sake of space considerations, I have not presented the full set of Doron's (1990, 1999) data here. The reader is referred, instead, to Doron's articles themselves, as well as to Goldberg (2002b), which does contain extensive discussion of individual examples from Doron's work with reference to the empirical problems which they pose for Doron's proposals.

independently in this language.[11] This is shown, for instance, in (30) for a locative argument, in (31) for a manner adverbial, and in (32) for a benefactive PP:

Hebrew: *Locative Argument Gap without DO Also Null

(30) Karmela natna et ha-sefer le-Xagit,
Karmela give[Past3Fsg] ACC the-book to-Chagit

ve-Yosef zarak et ha-kadur.
and-Yosef throw[Past3Msg] ACC the-ball

MEANS ONLY: ✓'Karmela gave the book to Chagit, and Yosef threw the ball'
NOT POSSIBLE: * 'Karmela gave the book to Chagit, and Yosef threw the ball <u>to her</u>.'

Hebrew: *Manner Adverbial PP Gap without DO Also Null[12]

(31) Tamar avda be-xaricut, ve-Avi katav.
Tamar work[Past3Fsg] in-efficiency and-Avi write[Past3Msg]

MEANS ONLY: ✓'Tamar worked efficiently, and Avi wrote.';
NOT POSSIBLE: * 'Tamar worked efficiently, and Avi wrote <u>efficiently</u>.'

Hebrew: *Benefactive PP Gap without DO Also Null

(32) Kaniti matana bišvil Miryam, ve-Natan asaf
buy[Past1sg] present for Miryam and-Natan gather[Past3Msg]

peraxim.
flowers

MEANS ONLY: ✓'(I) bought a present for Miryam, and Natan gathered flowers.'
NOT POSSIBLE: * '(I) bought a present for Miryam, and Natan gathered flowers <u>for her</u>.'

As a first step, then, examples in which such argument and adjunct PPs do elide cannot be instances in which they have dropped as null arguments.

[11]Note that Hebrew subjects are well-known in the literature to be able to elide as well, correlating roughly—but not fully—with cases in which a unique person-number inflection agreement form appears on the V. Since Hebrew subjects are viewed here (and in the majority of the literature on the language) as being VP-*external* at the level of representation relevant for ellipsis, however, I will not include discussion of the relevant facts here. The reader is referred to work such as by Borer (1991, 1989) and Artstein (1999) for discussion.

[12]Ideally, non-PP adverbials should be tested here as well. Unfortunately, however, the majority of manner-type adverbials used by speakers of (particularly) Modern Hebrew—which often translate into English as *ly*-final adverbs—are in fact PPs. *be-xaricut* in (31), translated as 'efficiently', but literally meaning 'in efficiency', is a case in point.

Additional information about Hebrew null argument strategies targeting direct objects becomes available when V-Stranding VPE is controlled for. In putative Null Object examples, I will systematically include a second, *overt* internal V argument, in addition to the null direct object, as in (33):[13]

Hebrew: Typical Null Object Example with Overt 2nd Internal Argument

(33) Dani'el šalax me'ilim la-yeladim, ve-Šira
Daniel *send[Past3Msg]* *coats* *to.the-children* *and-Shira*

natna la-mevugarim.
give[Past3Fsg] *to.the-adults*
'Daniel sent coats to the children, and Shira gave (~~coats~~) to the adults.'

Since non-direct-object internal arguments such as *la-mevugarim* 'to the adults' here should elide if VP Ellipsis has occurred, their inclusion is meant to help ensure that the only structure possible is that of a Null Object (with an intact VP).[14]

It might be objected that such examples could be instances not of null arguments, but, rather, of Pseudogapping, which much recent work takes to be a type of VP Ellipsis in which a remaindered element is extraposed outside the VP prior to ellipsis (among recent work, see e.g. Lasnik 1999:chapter 7, Johnson 2001, and references therein). On this view, then, the overt second

[13]The meaning of the elided direct object is shown in this example as 'coats', rather than as a pronoun such as 'them', since the first reading for speakers consulted is one in which the coats which the target-clause subject 'Shira' sent are not necessarily the same as those which the antecedent-clause subject 'Daniel' sent. The elided Hebrew direct object is shown as a struck-through pronoun, however, in some later examples in which my consultants' first reading (and sometimes their only reading) involves the elided direct object having the same denotation as that of its antecedent direct object.

[14]Note as well that the ungrammatical animate Null Object examples in (38-39) below, as well as grammatical inanimate Null Object examples in (43-44), make use of an additional strategy to rule out a VP analysis, which makes use of the fact that an instance of VPE will need to have, in the antecedent-containing clause, a VP suitable to serve as antecedent of the ellipsis. Thus, the antecedent clauses in such examples can be noted to contain constructions such as copula clauses (containing Hebrew's phonetically null copula), in which no such suitable VP is present. (See Goldberg 1998 for evidence that copula clauses in Hebrew illicit as antecedent or target clauses of the language's VP Ellipsis construction.)

argument used here to rule out a VPE analysis would in fact be this remaindered element. Such an objection is not tenable, for many of the same reasons that the Hebrew Null Object examples presented here are argued in Goldberg (2002b) not to receive a coherent alternative analysis as instances of Gapping.

Most compellingly, and as discussed recently by Johnson (2001), for instance, arguments going back to the initial work on Pseudogapping by Levin (1978, 1979) show that Pseudogapping in English (the only language in which I am aware of Pseudogapping having been carefully studied) is like Gapping in that it (A) is illicit when its antecedent and target clauses appear in a question-answer pair (but, rather, is allowed only in coordinate structures), and (B) requires that its remaindered element—i.e., for the Hebrew examples, the second internal argument which would have moved out of the VP prior to ellipsis—be contrastively focused with a non-identical correlate of the same XP category type which appears in the antecedent clause. Both traits are displayed, for example, in a typical English Pseudogapping example like (34):

(34) Naoko shredded [$_{DP}$ THE CARROTS], and Ingrid did [~~VP~~] [$_{DP}$ THE YAMS].

However, putative Hebrew Null Object examples—including the overt second internal argument used here in their target clauses—are as fully licit in question-answer pairs like the grammatical (42) and (43) below as they are in coordinated structures. Further, I have collected numerous grammatical examples of Hebrew Null Objects in which the overt second internal argument used in the target clause *lacks* a counterpart in the antecedent clause with which it could be contrastively focused. This is the case in examples such as (41) and (43-44) below, as well as in examples like (35):

(35) Eyn li et ha-maxavatot šeli ki hilvati le-Li'ora.
not to.me ACC the-frying.pans of.me because loan[Past1sg] to-Liora
'I do not have [lit: (exists) not to me] my frying pans because (I) loaned (~~them~~) to Liora.'

For considerations such as these, then, I take the overt second internal argument included in examples following the Hebrew Null Object here not to be coherently analyzable as a Pseudogapping remnant.[15]

Returning to the strategy outlined above for studying null object structures in V-Raising languages, then, employing this strategy for Hebrew results in the emergence of a new generalization not previously noticed in the literature by Doron (which contains the only mention of Hebrew Null Objects in the generative literature before Goldberg 2002a,b), presumably because that work does not control systematically for VP Ellipsis structures. This new generalization is that Hebrew Null (Direct) Objects are possible, but that they are licit *only* whey they are *inanimate*. Cases in which null direct objects are *animate*, however, are strongly ungrammatical:[16]

Hebrew: Representative Ungrammatical *Animate* Null Objects:

(36) *Šmu'el hošiv et ha-yeladot al ha-mita, ve-Dina
Shmuel sit[Past3Msg] ACC the-girls on the-bed and-Dina

hilbiša be-simlot.
dress[Past3Fsg] in-dresses
'Shmuel sat the girls on the bed, and Dina dressed (~~them~~) in dresses.'

[15]My thanks to Jonathan Bobaljik for pointing out to me the possibility of a Pseudogapping analysis for such examples.

[16]The verb *hisi'a* 'drive' used in the target clause of (39) here, and in additional examples below, is actually the morphological causative (the *hif'il* binyan) of the V 'travel'; it thus translates more literally as 'cause to travel'. Because of this, and unlike its English translation as 'drive', it *obligatorily* requires an accusative complement (the semantic causee).

(37) *Rina hisi'a et Gil ha-'ira ve-horida
Rina drive[Past3Fsg] ACC Gil the-town and-drop[Past3Fsg]

le-yad ha-bayit.
to-near the-house
'Rina drove Gil to town and dropped (~~him~~) near his home.'

(38) Q: Eyfo ha-'iš še-'amad po lifney rega?
where the-man that-stand[Past3Msg] here before moment
'Where (is) the man who stood here a moment ago?'

A: *Miryam hovila la-misrad.
Miryam lead[Past3Fsg] to.the-office
'Miryam led (~~him~~) to the office.'

(39) *Hine ha-yeladot šeli. Šošana hisi'a le-Tel-'Aviv
here the-girls of.me Shoshana drive[Past3Fsg] to-Tel-Aviv

etmol.
yesterday
'Here (are) my daughters. Shoshana drove (~~them~~) to Tel-Aviv yesterday.

The ban on animate null direct objects in Hebrew is extremely robust. Speakers presented such examples are typically entirely unaware that they were meant to read in the intended antecedent DP. Furthermore, when asked the reason for the ungrammaticality, they are seldom aware that the problem involves animacy. An overt accusative pronoun substituted for the direct object gap, however, yields a fully grammatical sentence (as is the case for all Null Object examples presented here, grammatical and ungrammatical, unless noted otherwise).

It is also of note that this ungrammaticality of animate Null Objects holds in a wide array of different sentence types, as in the coordinated sentences in (36), the coordinated verb phrases in (37), a question-answer pair in (38), and adjacent sentences uttered by the same speaker in (39). Furthermore, the ungrammaticality holds regardless of whether the antecedent DP is a name, as in (37), or contains an N head, as in (36) and (38-39), and, as also seen in these examples, regardless

of its gender or number.

In contrast, inanimate examples are fully acceptable with a range of construction and antecedent DP types:

Hebrew: Representative Grammatical *Inanimate* Null Objects:

(40) Yosef masar et ha-yayin le-Miryam, ve-Sara
Yosef hand[Past3Msg] ACC the-wine to-Miryam and-Sara

masra le-Yicxak.
hand[Past3Fsg] to-Yitschak.
'Yosef handed the wine to Miryam, and Sara handed (~~it~~) to Yitschak.'

(41) Sara raxca et kol ha-calaxot ve-xilka
Sara wash[Past3Fsg] ACC all the-plates and-distribute[Past3Fsg]

la-'orexim.
to.the-guests
'Sara washed all (of) the plates and distributed (~~them~~) to the guests.'

(42) Q: Ha-memšala sipka et ha-maxbarot la-'universita?
the-government supply[Past3Fsg] ACC the-notebooks to.the-univ.
'(Did) the government supply the notebooks to the university?'

A: Lo, anaxnu konim me-ha-xanut.
no we buy[BniMpl] from-the-store
'No, we buy (~~them~~) from the store.'

(43) Q: Efo ha-kacefet?
where the-whipped.cream
'Where (is) the whipped cream?'

A: He'evarti le-Mixa'el.
pass[Past1sg] to-Michael
'(I) passed (~~it~~) to Michael.'

(44) Ah, hine ha-šamenet. Ten li.
ah here the-cream give[Imp] to.me
'Ah, here (is) the cream. Give (~~it~~) to me, please.'

Thus, we observe licit coordinated sentences in (40), coordinated verb phrases in (41), question-

answer pairs in (42) and (43), and adjacent sentences uttered by the same speaker in (44). Moreover, the imaginable range of antecedent DP types are licit within the inanimacy restriction. Thus, we see singular direct objects elided in (40) and (43-44), and plural Null Objects in (41) and (42). Examples (41-44) have feminine antecedents, but (40) above and (45) below use masculine antecedents. Finally, (41) and (42) involve count nouns, while (40), (43), and (44) involve mass nouns.

Although the examples above contain definite antecedents, indefinite antecedents are also licit:

Hebrew Null Objects: ✓Indefinite Antecedents

(45)	Ana	katfa	te'enim	ve-hevi'a	le-xadar-'oxel.
	Ana	*pick.up[Past3Fsg]*	*figs*	*and-bring[Past3Fsg]*	*to-room-food*

'Ana picked up (some) figs, and brought (~~them~~) to the dining room.'

Finally, note that, although most grammatical Null Object examples above have had a primary reading in which the gap shares its denotation with that of its antecedent DP (as is the *only* reading possible when an overt accusative pronoun is used in place of the object gap), this is not a requirement. Thus, when pragmatics favors an interpretation in which the content of the null object denotes something other than what is denoted by the antecedent DP, this is indeed the primary reading which speakers report. This is the case for examples like (46), for instance, in which it would be odd for there to be a singular gift which Aviva brought and Miryam gave to Moshe; it is true as well for (33), repeated here from above, in which pragmatics favor similarly non-identical denotations for the two DPs:

Hebrew Null Objects: ✓Non-identical Denotations for Antecedent and Target DP

(46) Aviva hevi'a matana le-Moše, ve-Miryam
Aviva bring[Past3Fsg] gift to-Moshe and-Miryam

šalxa lo.
send[Past3Fsg] to.him
'Aviva brought (a) gift to Moshe, and Miryam sent (~~one~~) to him.'

(33) Dani'el šalax me'ilim la-yeladim, ve-Šira
Daniel send[Past3Msg] coats to.the-children and-Shira

natna la-mevugarim.
give[Past3Fsg] to.the-adults
'Daniel sent coats to the children, and Shira gave (~~coats~~) to the adults.'

It seems, then, that Hebrew does have a productive null argument strategy, but a restricted one, allowing only inanimate direct objects to drop independently.[17] We can conclude this section by noting that, if the above observations are on the right track, then a prediction is made. The examples of ungrammatical animate Null Objects in (36-39) above contained target clauses in which a null *animate* direct object was combined with an *overt* indirect object. By what has been established so far, the ungrammaticality of such examples results from the animacy of their null direct object (which precludes the possibility of a Null Object structure) combined with the presence of the overt second internal argument (which in turn precludes the possibility of a V-Stranding VPE structure). Given that VP Ellipsis should not display the inanimacy restriction seen for Hebrew Null Objects, we would expect that if Hebrew does indeed have a VP Ellipsis construction in addition to its Null Object construction just isolated, then such examples should become *grammatical*—as examples of V-Stranding VPE—if the target clause's overt second internal argument is removed.

[17]There is more to be said about Hebrew Null Objects than has been presented here. The reader is thus referred to Goldberg (2002b) for an extensive treatment of these gaps, including discussion of why it is not tenable to analyze them alternatively as cases of Gapping rather than as null arguments, of whether and how the inanimacy restriction should be treated theoretically, and for arguments that they arise as traces of the A-bar movement of a null syntactic operator.

And, indeed, this prediction is borne out, as shown in the grammaticality contrast between (47) and (48):

Hebrew: Null Animate DO (*Null Object) and *Overt* Indirect Object (*VPE)
Context: Dvora is pregnant and has many errands to do; Miryam, who has a car but is sometimes inconsiderate, is supposed to be helping her.

(47) Q: (Ha-'im) Miryam hisi'a et Dvora la-makolet?
Q Miryam drive[Past3Fsg] ACC Dvora to.the-grocery.store
'(Did) Miryam drive Dvora to the grocery store?

A: * Lo, 'aval hi hisi'a la-DO'AR.
no but she drive[Past3Fsg] to.the-post.office
'No, but she drove (~~her~~) to the POST OFFICE.'

Hebrew: Null Animate DO (*as Null Object) and *Null* Indirect Object, ✓as VPE
Context: Same.

(48) Q: (Ha-'im) Miryam hisi'a et Dvora la-makolet?
Q Miryam drive[Past3Fsg] ACC Dvora to.the-grocery.store
'(Did) Miryam [drive Dvora to the grocery store]?'

A: Ken, hi hisi'a.
yes she drive[Past3Fsg]
'Yes, she drove [~~Dvora to the grocery store~~].'

Thus, the inanimacy generalization and other assumptions made here appear so far to be on the right track in terms of uncovering the relevant facts.

Since Hebrew allows only its direct objects, among its available VP-internal elements, to appear as null, and furthermore since such null direct objects are licit only when they are inanimate, the null argument analysis is ruled out in data which are constructed to investigate Hebrew V-Stranding VPE. Such examples can use either—and, wherever possible, both—of the traits of, first, having an overt internal argument which elides along with the direct object, and, second, containing a null direct object which is *animate*, and so cannot have dropped via the language's Null Object strategy. Once this is done, the work cited above by Doron, along with data such as those cited

above (see examples (20-23) of Subsection 1.2), in my own previous research (see Goldberg 1998, 2002a,b), and in various examples which turn out to have contained animate direct objects in the work of Doron (1990, 1999) and Ussushkin/Sherman (1997) provide a solid case for the existence of V-Stranding VPE in Hebrew.

4. Ruling Out a Null Object Analysis for Swahili and Ndendeule VPE Data

We now consider the Southern Bantu languages Swahili and Ndendeule, applying the strategy laid out in 2.2 as was just done for Hebrew to data from these languages. The points made in this section are taken from the careful work of Ngonyani (1996a, 1998). The set of data given for these languages in Ngonyani's work is somewhat less complete than the material which I have given above for Hebrew, or the material given below for Irish from the work of McCloskey and others. Nonetheless, I include it here for the sake of readers who may not yet have had access to this research (given that it has not yet been widely distributed), since I believe it to present a compelling case for the existence of V-Stranding VPE in at least Swahili.[18]

Given that both Swahili and Ndendeule have a basic SVO sentence order, the data from Ngonyani's work provide a useful point of comparison with the SVO facts from Hebrew laid out above. In particular, in terms of the larger aims of this thesis—i.e. making the argument that V-Stranding VP Ellipsis is an extant ellipsis strategy available to V Raising languages—it is especially

[18]Although Ngonyani's (1996a,b, 1998) research was on both Swahili and Ndendeule, it presents at times data from only one of the two, and I have unfortunately been unable to contact the author for the additional data needed. On the whole, a more complete picture is presented for Swahili than for Ndendeule. Thus, the content of this section might be taken as showing that the claims made hold for Swahili, and that they *appear* to hold for Ndendeule as well, given especially the fact that null direct objects in this language are shown to be illicit without an accompanying object-agreement clitic, *except* in VPE contexts. Further work is needed for Ndendeule, however, to fully elucidate the situation by providing additional data.

interesting that languages in very different families and sub-classifications (Bantu of the Niger-Congo family versus Semitic of the Afro-Asiatic family), and with a range of differences in the workings of their internal syntax, turn out to have putative V-Stranding VPE constructions which are remarkably similar in their essential make-up. Thus, putative V-Stranding VPE in all of Hebrew, Swahili, and Ndendeule consistently involves elision of the *internal* arguments of the VP, stranding of the main V, and, unlike Irish, stranding of the subject as well.

First, then, as was shown above for Hebrew, there is independent evidence motivating obligatory V-to-Infl raising for main Vs in Swahili.[19] Also, as in Hebrew, such main Vs bear all inflectional morphology in the clause (thus with no auxiliary V elements present):

Swahili: VP-Edge Elements Obligatorily *Follow* the Main V

Manner Adverb:

(49) ✓Juma a-li-maliz-a kabisa kazi
Juma 1Su-Past-FINISH-FV completely 9.work
'Juma finished completely the work.' *(Ngonyani 1996a:ex.8d)*

(50) *Juma kabisa a-li-maliz-a kazi.
Juma completely 1Su-Past-FINISH-FV 9.work
'Juma completely finished the work.' *(Ngonyani 1996a:ex.8b)*

Thus, V-Stranding VP Ellipsis will be an available construction for Swahili at least (and, as noted in footnote 19, presumably in Ndendeule as well, once data from that language becomes available). And, as is true whenever this is the case, the distribution of null arguments in this language must be explored in order to discover how to avoid the problem of ambiguity between a V-Stranding VPE and a null argument analysis in putative VPE data.

As Ngonyani shows, null VP-internal null arguments are allowed in both languages (A) only

[19]The text of Ngonyani (1996a:pp.112-114) argues that analogous manner adverb placement facts hold in Ndendeule as well, but a paradigm along the lines of Swahili (49) is unfortunately not presented by Ngonyani for Ndendeule.

when targeting a direct object, and, furthermore, (B) only when accompanied by an object-agreement clitic on the V which agrees with the null object.[20] This is seen in the grammaticality contrast between the following examples:

Swahili and Ndendeule: Null Direct Objects Possible *Only* with Object-Agreement

Swahili

(51) a. Kamau a-li-m-beb-a m-toto.
Kamau 1Su-Past-1Obj-CARRY-FV 1-child
'Kamau carried the child.' *(Ngonyani 1996a:ex.13a-b)*

✓*Null Object with Accompanying Object Agreement Clitic:*

b. Kamau a-li-m-beb-a.
Kamau 1Su-Past-1Obj-CARRY-FV
'Kamau carried (~~the child~~).' *(Ngonyani 1996a:ex.13c)*

**Null Object with NO Object Agreement Clitic Present:*

c. *Kamau a-li-beb-a.
Kamau 1Su-Past-CARRY-FV
'Kamau carried (~~the child~~).' *(Ngonyani 1996a:ex.13e)*

Ndendeule:

(52) a. βa-ki-n-amukí nE.
2Su-Past-Obj-GREET me
'(~~They~~) greeted me.' *(Ngonyani 1996a:ex.10a)*

✓*Null Object with Accompanying Object Agreement Clitic:*

b. βa-ki-n-amukí.
2Su-Past-Obj-GREET
'(~~They~~) greeted (~~me~~).' *(Ngonyani 1996a:ex.10b)*

**Null Object with NO Object Agreement Clitic Present:*

c. *βa-ki-amukí.
2Su-Past-GREET
'(~~They~~) greeted (~~me~~).' *(Ngonyani 1996a:ex.11)*

[20]As discussed in footnote 2 of Chapter 1, I refer to such object clitics which appear on the verb object agreement morphemes, though acknowledging the controversy in the Bantu literature between such an analysis versus as an incorporated object pronoun. This footnote also presents the conventions used here and throughout in Swahili and Ndendeule examples.

It is thus interesting that, in a situation in which an antecedent clause is present, a direct object *can* appear as null *without* an accompanying object agreement clitic:

✓Missing DO *without* Object Agreement with VPE Antecedent Clause Available

Swahili:

(53) Q: Mariamu a-li-nunu-a nyumba?
Mariamu 1Su-Past-BUY-FV house
'(Did) Mariamu buy a house?'

A: Ndiyo, a-li-nunu-a.
yes 1Su-Past-BUY-FV
'Yes, (~~she~~) bought (~~a house~~).' *(Ngonyani 1998:ex.1d)*

(54) Juma a-li-beb-a m-toto
Juma 1Su-Past-CARRY-FV 1-child

na Kumau a-li-beb-a pia.
and Kamau 1Su-Past-CARRY-FV too
'Juma carried a child, and Kamau carried (~~a child~~) too.' *(Ngonyani 1996a:ex.14a-b)*

Ndendeule:

(55) Joni a-ki-hemé nyumba na Malia
John 1Su-Past-BUY 9.house and Mary

a-ki-hemé helahe.
1Su-Past-BUY also
'John bought a house, and Mary bought (~~a house~~) also.' *(Ngonyani 1996a:ex.5)*

It is thus examples such as (53-55) which are argued by Ngonyani to instantiate V-Stranding VP Ellipsis in the languages concerned. Given the additional array of behavioral similarities with English VPE present in the data which Ngonyani's work adduces, then, a good case emerges for the existence of V-Stranding VPE in Swahili. For Ndendeule, it seems likely that such a result will emerge once the full set of data are gathered.

5. Ruling Out a Null Argument Analysis for Irish VPE Data

Finally, we consider the case of Irish. It has, of course, been noted in much research on both language groups that Celtic languages like Irish display striking similarities in numerous aspects of their syntax to Semitic languages like Hebrew,[21] including putative V-Stranding VPE. And, indeed, the same fundamental properties as have been proposed for this construction in Hebrew have also been proposed for its equivalent in Irish.

Nonetheless, the modern spoken varieties of Hebrew and Irish are different enough in their syntax that what has been posited to be V-Stranding VP Ellipsis in Irish has superficial traits that differ in certain ways from those in the Hebrew ellipsis construction. Specifically, Modern Irish (unlike Modern Hebrew, though like Biblical Hebrew) has a VSO basic clausal order in finite clauses. Given that the post-verbal subjects of such clauses appear from the literature on the language to lie internal to the domain which ellipsis targets, these subjects elide obligatorily in the Irish ellipsis construction—contrasting with Hebrew's (and Swahili's and Ndendeule's) *pre*-verbal subjects, which necessarily remain *overt* in VPE. Before presenting data to this effect, however, let us first carry out the same initial steps for this language as were carried out above for Hebrew, Swahili, Ndendeule.

[21]Thus, much generative work has proposed similar analyses for constructions in Celtic languages such as Irish or Welsh on the one hand and Hebrew or Arabic on the other; this includes, among many others, work by Doron (1988), Duffield (1995), Sells (1987), and Roberts and Shlonsky (1996). Outside the generative tradition, Jongeling (2000), focusing specifically on Welsh and Biblical Hebrew, presents an extremely interesting compilation and discussion of literature from the 17th century to the present which compares similarities between the Celtic and Semitic languages, and features a longstanding debate on whether a historical relation might exist between the two language groups, possibly involving contact between Celtic and Semitic speakers in some prehistoric period.

5.1. The motivation for V-to-Infl Raising in Irish

Regarding the issue of V-Stranding VPE being a possible construction for Irish, I first present arguments from the literature on this language that its finite main V—which, like the main Vs in the languages discussed above, bears all inflectional morphology in many clauses, and indeed in all clauses for which VPE is discussed—raises obligatorily into the inflectional domain by S-Structure.[22]

Strong arguments to this effect are available from Irish, but presenting them requires slightly more elaboration than was needed for the languages discussed above, as well as is the generally the case for what are thought of as prototypical V Raising languages such as those in the Romance group. This is due to the existence of a strong requirement of adjacency between the main V of Irish and the post-verbal subject. Thus, as discussed by e.g. McCloskey (1991), the normal sorts of adverb placement diagnostics actually show the V (with the exception of copulas as discussed in Chung and

[22]Two additional points are of note here. First, I will restrict my discussion of Irish throughout this thesis to *finite* clauses, in which the canonical order is VSO, and for which V Raising has been extensively motivated in the literature (see references below). Irish *nonfinite* clauses have a markedly different basic order, that of SOV; treatments such as McCloskey (1991:262) have attributed the lack of V-initial order in such clauses to a failure of the nonfinite main V to raise out of the verb phrasal domain, as consistent with a similar absence of V Raising in numerous other languages, including Welsh (Sproat 1985), French (e.g. Emonds 1978, Taraldsen 1983, Pollock 1989, Chomsky 1988), Germanic languages (e.g. Den Besten 1983), and Vata and Gbadi (Koopman 1984). (For treatments of the pre-verbal position of the object, see e.g. McCloskey and Sells (1988), Duffield (1995) and references therein.) Given that Irish nonfinite clauses lack V Raising, then, I will exclude them from the present discussion, since our sole focus here involves cases of V-Stranding VPE.

Second, I remain neutral here on the debate over whether there is subsequent raising of the Irish finite main V into the CP domain (e.g. Deprez and Hale 1986, Hale 1989, Stowell 1989, Doherty 1992), or, rather, whether this V raises only as high as the Infl domain (see e.g. Chung and McCloskey 1987; McCloskey e.g. 1991, and particularly 1996a; Duffield e.g. 1995; Koopman and Sportiche e.g. 1991; Guilfoyle 1990; see also similar work on Welsh, such as Rouveret 1990). What is agreed upon within work on either view, however, is that the finite main V does move *at least* as high as the Inflectional domain—i.e. that it does *not* remain internal to the VP at S-Structure.

For the sake of concreteness, I will speak here of the V raising only into the inflectional domain (largely because I find the arguments in McCloskey 1996a and Duffield 1995 to be compelling). However, I believe that the ellipsis analysis of Irish will remain intact even under a view in which Irish Vs lie in C° at S-Structure. In such a case (and as Doherty 1992 suggests explicitly), Irish 'VP Ellipsis' would become 'IP Ellipsis'. However, the core similarity with English, Hebrew, and Swahili VPE would remain intact, if parameterized in some sense—namely, that what has been known (for English) as 'VPE' is a construction involving ellipsis of the complement to the clause's primary-inflection-bearing head. For further discussion on the notion of 'IP Ellipsis', the reader is referred to the discussion of similar claims for languages such as Basque (Laka 1990) and Finnish (Holmberg 1999, 2001).

McCloskey 1987) to be ungrammatical when immediately followed by an adverb. This is true for any element; the examples shown here show a variety of adverb types in (56-57), and a preposed direct object in (58):[23,24]

Irish: *Adverb Immediately Following the Main V

(56) a. *Cuireann go minic na mic léinn isteach ar phostanna
put[PastAnl] *often* *the* *students* *in* *on* *jobs*
'The students often apply for jobs.' *(McCloskey 1991:*ex.4b)

b. *Chonaic inné na gasraí capall mór bán ansin.
see[PastAnl] *yesterday* *the* *boys* *horse* *big* *white* *there*
'The boys saw a great white horse there yesterday.' *(McCloskey 1991:ex.4a)*

(57) a. *Chuala ar ndóigh mé an tamhrán sin.
hear[PastAnl] *of course* *I* *the* *song* *DEMON*
'I of course heard that song.' *(Duffield 1995:Ch2,ex.27b)*

b. *Dúirt sí gur chuir leoga sí an cheist air.
say[PastAnl] *she* *COMP-PAST* *put[PastAnl]* *certainly* *she* *the* *question* *to-him*
'She said that indeed she asked him the question.' *(Duffield 1995:Ch2,ex.27c)*

[23]As noted in Chapter 1, Irish analytic V forms, which—unlike the language's synthetic V forms—occur without subject agreement and thus do not allow an accompanying null subject, are noted as analytic via the abbreviation "Anl" in the morpheme glosses used throughout this thesis. Thus, while an agreeing, synthetic V form gloss will show subject agreement on the V, e.g. *cuirim*, 'put[Pres1sg]', i.e. '(I) put', analytic Vs will not show such subject agreement, but instead just the notation "Anl", e.g. *cuireann sé*, 'put[PresAnl] he', i.e. 'he puts'. As will become clearer as this section progresses, this is done to aid the transparency of examples in terms of whether a given missing VP-internal subject has merely *pro*-dropped (because it occurs with a synthetic V form), or, rather, whether it has actually *elided* as part of the VP constituent in putative V-Stranding VPE examples.

[24]The sentence-final *sin* in (57a), when used with *an*, which ordinarily means 'the' (the two elements thus separated by the modified N, here *tamhrán* 'song', results in the meaning 'that N'. Thus, *an tamhrán sin*, as in this example, means 'that song'; without *sin*, the string *an tamhrán* would mean just 'the song'. As alluded to by e.g. McCloskey and Hale (1984:496), such demonstrative particles (namely, *seo* 'this' and *sin* 'that') are also used as independent demonstrative pronouns.

(58) *Chonaic capall mór bán ansin inné na gasraí.
see[PastAnl] *horse* *big* *white* *there* *yesterday* *the* *boys.*
'The boys saw a great white horse there yesterday.' *(McCloskey 1991:ex.4c)*

This adjacency requirement is attributed (see e.g. McCloskey 1991:264) to a general adjacency requirement on Case assignment (as in Stowell 1981), so that the failure of grammaticality in these examples is due to the inability of the VP-internal subject to receive Case. Thus, although the examples are illicit, this appears to be due to independent factors, and thus not relevant to the issue of diagnosing the position of the V.

The position of the V can, however, be adduced by a number of tests which show that the material following the finite V—i.e. comprising the subject, the direct object, and any additional elements present in the verb-phrasal domain—clearly forms a constituent. This, combined with the fact of surface VSO order, motivates an analysis in which the V must lie at S-Structure outside the node which immediately contains the subject, and thus, by hypothesis, in (a subpart of) Infl.[25]

Such evidence that the post-verbal material forms a constituent is presented largely in Chung and McCloskey (1987), and in McCloskey (1991), and comes from standard constituency tests, as well as from tests which exploit language-internal traits of Irish.[26] I will present evidence here from standardly used tests, namely the ability of the string to be Pseudoclefted, to undergo Right Node Raising, and the ability to be coordinated. The reader is referred to these works for much additional

[25]Among the research which views the finite V to lie in the Infl and not the CP domain in overt syntax, it is generally taken, furthermore, that the V lies in the *highest* sub-part of Infl (as argued in e.g. McCloskey 1996a; see also discussion in Duffield 1995). This in turn means that it would be possible for the subject to raise out of the VP as well, so long as ultimately lands in the specifier of whatever Infl sub-projection serves as complement to the head containing the V.

[26]The identity of this post-verbal constituent is argued to be a Small Clause of the category S by Chung and McCloskey (1987), and is then revised by McCloskey (1991) to be V^{max}. On more recent conceptions, and assuming this to still be a predicative rather than inflectional constituent—on which see McCloskey (2003a)—this might be taken to be the highest sub-projection of the verb phrasal domain, e.g. as *v*P on some views.

discussion and motivation of the constituency of this string. First, then, we see in the following examples that this post-verbal string can be both Pseudoclefted and Right Node Raised, respectively:

Irish: The Material Immediately Following the V Forms a Constituent

Pseudoclefting:

(59) a. Séard a chuala mé ná [na daoine ag imeacht].
what COMP hear[PastAnl] I PTC the people leave[ProgAnl]
'What I heard was the people leaving. *(Chung and McCloskey 1987:ex.21a)*

b. Séard a chonaic mé ná [tusa ar meisce].
what COMP see[PastAnl] I PTC you drunk
'What I saw was you drunk. *(Chung and McCloskey 1987:ex.21b)*

Right Node Raising:

(60) a. Níor thug, nó is beag má thug,
NEG-COMP give[PastAnl] or almost-didn't-give

[an pobal aon aird ar an bhean bhocht].
the community any attention on the woman poor
'The community paid no attention, or almost no attention, to the poor woman.'
(McCloskey 1991:ex.12)

b. Níor chuala nó ní fhaca
NEG[Past] hear[PastAnl] or NEG[Past] see[PastAnl]

[na fir rud ar bith].
the men thing any
'The men neither neard nor saw anything.' *(McCloskey 2003a:ex.6)*

For coordination, it is necessary first to consider the fact that the V has raised out of the post-verbal material argued to be a constituent. This means that, for coordination to be licit, raising of the V has to happen in Across The Board ('ATB', as in Williams 1978) fashion. This means that the Vs in the two conjuncts must be identical, since, if they are non-identical, then ATB movement will not be possible, and the consequent V raising will result in a violation of the Coordinate Structure Constraint. When such Vs are identical, the examples are again grammatical, motivating again the

constituency of the post-verbal material:

Irish: The Material Immediately Following the Verb Forms a Constituent

Coordination:

(61) Nuair a thosuigh [na crainnte dá leagan
when COMP begin[PastAnl] the trees fell[ProgPasvAnl]

treasna an bhóthair] agus [na droichid dá gcur in- aer].
across the road and the bridges put[ProgPasvAnl] in air
'When trees began to be felled across the road and bridges began to be blown up.'
(McCloskey 1991:ex.18)

(62) a. Cha raibh [madadh ar bith againn] nó [muid
NEG was dog any at-us or us

ábalta madadh a cheannach].
able dog buy[Nonfin]
'We had no dog, nor were we able to buy a dog.' *(McCloskey 1991:ex.19a)*

b. Ní raibh [aoinne marbh] nó [aon chnámh briste].
NEG was anybody dead or any bone broken
'Nobody was dead nor was any bone broken.' *(McCloskey 1991:ex.19b)*

Notably, the examples in (62) show each conjunct within the scope of negation (represented by the negative complementizer); this is made especially clear by (62b), which contains the negative polarity items *aoinne* 'anybody' and *aon* 'any' in each respective conjunct.

I will henceforth assume that this evidence, plus that given additionally in the literature cited and the fact of surface VSO order in Irish finite clauses, motivates the raising of the Irish V in such clauses out of the verb-phrasal domain. Given that, and its consequence that Irish is a candidate for having V-Stranding VP Ellipsis, the next step is thus to work out the extent to which VP-internal elements may independently surface as null in this language, and the conditions under which this is possible.

5.2. The distribution of VP-internal null arguments in Irish

As was the case for the position of the Irish main V, this topic has already been studied extensively in the literature. The basic facts are laid out by McCloskey and Hale (1984), and by McCloskey (1986); I will thus present the key generalizations from that research here.

Independently of what has been claimed to be VP Ellipsis in this language, the availability of individual Irish arguments to surface as null is tied overwhelmingly to the presence of agreement on a corresponding V, P, or N head. A somewhat striking feature of this language, discussed by McCloskey and by McCloskey and Hale, is that, when compared with typical *pro* drop languages such as Spanish or Italian is that it is strongly *ungrammatical* in Irish for an overt pronoun to be used in the presence of such agreement (cf. Spanish or Italian, for instance, in which subject *pro* is generally preferred in the presence of a V marked with subject-agreement, but overt pronouns are not strictly ungrammatical, and can be used to mark properties such as emphasis). This means that Irish has null subjects for Vs conjugated with subject-agreement, null complements of Ps when the P is marked for agreement with its complement, and null possessor arguments when the possessed N agrees with its possessor. Since all three types of null argument can appear VP-internally, and null subjects necessarily so, each is discussed in turn.

For the complement of P, the null complement pattern is seen as follows:

Irish: Inflected Prepositions Obligatorily Take Null Complements[27]

(63) a. ✓Bhí mé ag caint leofa inné.
was I talk[ProgAnl] with[3pl] yesterday
'I was talking to (~~them~~) yesterday.' *(McCloskey and Hale 1984:ex.40)*

[27]Example (63b) as shown here is actually presented in McCloskey and Hale (1984) as the sole PP **leofa iad/siad*, without the remainder of the sentence in which it would appear. I have placed it in a full sentence by including it in an example based on (63a) here, McCloskey and Hale's (1984) example (40).

b. *Bhí mé ag caint leofa iad/siad inné.
was I talk[ProgAnl] with[3pl] them/they yesterday
'I was talking to them yesterday.' *(based on McCloskey and Hale 1984:ex.41)*

c. ✓...le Máire...
with Mary
'...with Mary...' *(McCloskey and Hale 1984:ex.42)*

d. ✓...gan iad...
without them
'...without them...' *(McCloskey and Hale 1984:ex.43)*

(64) *...le mé... (cf. ✓...liom ø)
with I/me *with[1sg]*
'...with me...' '...with (~~me~~)...' *(McCloskey 1986:ex.18a-b)*

In (63a), we see the only way in which it is grammatical to use an inflected preposition, with no overt pronoun accompanying the P.[28] (63b) shows that use of an inflected P with an overt pronoun—whether nominative or accusative—is strongly ungrammatical. In cases in which an overt pronoun or full DP is used, then, the only available possibility is as in (63c-d), in which a *non-agreeing* P form is used. Finally, (64) shows that it is ungrammatical to use a *non-agreeing* P form with an overt pronoun when an *agreeing* P form exists.

The pattern just seen for P complements is the same pattern which appears for the subjects of subject-agreement-inflected Vs, as well for possessor-inflected Ns. In order to consider null subject occurrence, it is necessary to first describe the two types of V conjugations in this language, for which generative work has borrowed the terms 'synthetic' and 'analytic' from the traditional Irish literature. Within a single conjugation paradigm in this language, some person-number conjugations

[28]McCloskey and Hale (1984) and McCloskey (1986) (and maintained in the large body of subsequent work by McCloskey) argue extensively that the nonovert arguments of inflected P, N, and V heads in Irish are instances of *pro*. I will not present the evidence for this here, since, as was the case for Hebrew's Null Objects above, the analysis of these elements is not of crucial importance here; the reader is, however, referred to these two articles for the relevant facts.

will have a 'synthetic' form which contains subject person- and number-agreement; the remaining person-number combinations which lack a synthetic form will be marked with the 'analytic' form, on which the only inflection is for tense or mood. Further, the particular person-number combinations which have a synthetic, agreeing form for a single V typically differs for that V's paradigms in different tenses and moods. (The number of synthetic V forms which exist also differs from dialect to dialect.) As an example, consider the following paradigms for the V *cuir* 'put' in the present, past, and imperfect tenses, reproduced from McGonagle (1998:25-31):

(65) **Irish: *cuir* 'put'**

	Present		**Past**		**Imperfect**	
1 Sg	cuirim *put[Pres1sg]*	ø	chuir *put[PastAnl]*	mé *I*	chuirinn *put[Impft1sg]*	ø
2 Sg	cuireann *put[PresAnl]*	tú *you[sg]*	chuir *put[PastAnl]*	tú *you[sg]*	chuirteá *put[Impft2sg]*	ø
3 Sg	cuireann *put[PresAnl]*	sé/sí *he/she*	chuir *put[PastAnl]*	sé/sí *he/she*	chuireadh *put[ImpftAnl]*	sé/sí *he/she*
1 Pl	cuirimid *put[Pres1sg]*	ø	chuireamar *put[Past1pl]*	ø	chuirimis *put[Impft1pl]*	ø
2 Pl	cuireann *put[PresAnl]*	sibh *you[pl]*	chuir *put[PastAnl]*	sibh *you[pl]*	chuireadh *put[ImpftAnl]*	sibh *you[pl]*
3 Pl	cuireann *put[PresAnl]*	siad *they*	chuir *put[PastAnl]*	siad *they*	chuiridís *put[Impft3pl]*	ø

As seen here, the present tense has synthetic forms only in the first person singular and plural; for all second and third persons, then, 'put' in the present is expressed by a single analytic form, *cuireann*, plus an overt subject—regardless of the person and number values of this subject. The same will hold in the past, for which the analytic form is *chuir*, but with the difference that first person singular lacks a synthetic form—thus only the first person plural uses an agreeing V form and

a null subject for 'put' in the past tense. The imperfect for 'put' contrasts with these in having synthetic forms for nearly all conjugations, using its analytic *chuireadh* for only the third person singular (which lacks a synthetic form for all Vs and all tenses and moods) and the second person plural.

Having understood a bit about the conjugation schematics of the Irish verbal system, then, the null subject possibilities can be seen to be tied in with the presence of a synthetic, agreeing V-form. Thus, as in the chart above, null subject pronouns are obligatory when a synthetic V form is available:

Irish: Licit Use of Synthetic V Forms

(66) Dá gcuirfeá isteach ar an phost sin gheobhfá é.
if put[Condnl2sg] in on the job DEMON get[Condnl2sg] it
'If (~~you~~) applied for that job, (~~you~~) would get it.' *(McCloskey and Hale 1984:ex.1)*

When such a synthetic form *is* available, it is ungrammatical for that person-number to use the analytic, non-agreeing form with an overt pronoun instead. It is also ungrammatical to use an overt pronoun with a synthetic, agreeing V:

Irish: *Synthetic V with an Overt Pronoun,
***Analytic V When a Synthetic Form Exists**

(67) a. *Chuirfinn mé isteach ar an phost sin.
put[Condnl1sg] I in on the job DEMON
'I would apply for that job.' *(McCloskey and Hale 1984:ex.6a)*

b. *Chuirfeadh mé isteach ar an phost sin.
put[CondnlAnl] I in on the job DEMON
'I would apply for that job.' *(McCloskey and Hale 1984:ex.7)*

Finally, we see the licit use of analytic V forms in (68a-b). In (68a), the subject is expressed with a pronoun, and the person-number combination of the pronoun has no synthetic V form available (recalling that Irish has no third person singular synthetic forms). In (68b), the subject is

expressed with a full DP.

Irish: ✓Analytic V with Overt Pronoun When No Synthetic Form Exists,
✓Analytic V with Full DP Subject

(68) a. Cuireann sé ar a suaimhneas iad.
put[PresAnl] he on their ease them
'He puts them at their ease.' *(Duffield 1995:Ch2,ex.19a)*

b. Chuirfeadh [$_{DP}$ na léachtóirí uilig] isteach ar an
put[CondnlAnl] the lecturers all in on the

phost sin.
job DEMON
'All the lecturers would apply for that job.' *(McCloskey and Hale 1984:ex.4b)*

The distribution and use of analytic V forms will be important when VP Ellipsis is considered for this language, since putative VPE examples which involve the licit use of an analytic V form will be clear cases in which the subject has elided *under VPE*—as opposed to being an instance of an independently null subject—since a null subject will be independently impossible without a synthetic V being used.

Lastly, we turn to null possessive pronouns. The pattern of distribution for such elements is once again as has been seen for complements of inflected Ps, and for subjects of inflected (synthetic) Vs. Here, McCloskey and Hale (1984; see McCloskey 1986 for further support) argue that what might initially be viewed as a possessor pronoun is actually an *agreement* morpheme cliticized to the left of the possessed N head. Thus, they argue that DPs such as in (69a-b) are instances in which the possessor is, in fact, null:

Irish: ✓Null Possessor with Possessor-Agreement Prefix on the Possessed N

(69) a. mo theach ø
1sg house
'(~~my~~) house' *(McCloskey and Hale 1984:ex.56a)*

b. bhur dteach ø
2pl house
'(~~your-pl~~) house' *(McCloskey and Hale 1984:ex.56b)*

Among other benefits, this analysis brings the ordering of elements in such structures into line with that of DPs which contain a full-DP possessor, which, as shown in (70a-b), always appear to the *right* of the possessed head—as consistent with the overwhelmingly head-initial nature of the language:

Irish: Overt Possessor DPs Appear to the *Right* of the Possessed N

(70) a. teach an tsagairt
house the priest[Gen]
'the priest's house' *(McCloskey and Hale 1984:ex.54b)*

b. teach beag suarach thuismitheoirí Eoghain
house little wretched parents[Gen] Owen[Gen]
'Owen's parents' wretched little house' *(McCloskey and Hale 1984:ex.55b)*

On this view, then, the absence of a nominal suffix on these examples is on a direct par with the obligatory use of analytic V forms and non-agreeing P forms with overt pronouns and full DPs. In the same vein, (what is considered on this analysis to be) the nominal possessor prefix *mo* is ungrammatical when co-occurring with an overt possessor pronoun:

Irish: *Nominal Possessive Prefix with Overt Possessor Pronoun

(71) *mo theach mé
1sg house I/me
'my house' *(McCloskey and Hale 1984:ex.62c)*

The additional arguments in favor of this treatment come from the fact that what it views as the null possessor pronoun the same reflexive, demonstrative, and contrastive markers as do other

instances of Irish *pro*, that this null possessor can, like other Irish *pro*s, function as a resumptive pronoun, head a relative clause, and be conjoined with an overt DP. I will not present the motivating data for these arguments, but instead refer the reader to McCloskey and Hale (1984).

We close this sub-section, however, with one additional fact involving this genitive element which is relevant to the present discussion. This involves the question of whether Irish, like the languages seen above, allows null direct objects. The general answer to this latter question is that it does not. This means that the task of disambiguating V-Stranding VPE from Null Argument structures will *not* require a device for ruling out a Null Object analyses as was developed for Hebrew, Swahili, and Ndendeule above.

However, one instance in which Irish does allow what can be construed as Null Objects involves the direct object of what are called 'Verbal Nouns', as discussed in McCloskey (1980, 1983). These elements are used to express many nonfinite V forms, and appear preceded by a particle. Their nominal nature comes, in part, from the fact that their direct object appears in genitive, as opposed to accusative, case:

Irish: Verbal Ns take Genitive Direct Objects

(72) Bhí muid ag cuartú tí.
be[PastAnl] we PTC seek[VerbalN] house[Gen]
'We were looking for a house.' *(McCloskey and Hale 1984:ex.58a)*

Interestingly, the genitive complements to such Verbal Ns behave consistently with the behavior of possessors in DPs: they appear as null when accompanied by one of the elements analyzed as described above for possessors in DPs marking agreement with a genitive argument. Thus, the same *mo-* which was shown above to precede the possessed N—and to mark a first person singular possessor—also precedes the Verbal N when the complement of that N is null:

Irish: Possessor Agreement Precedes Verbal Ns Whose DO is Null

(73) Bhí siad mo chuartú.
be[PastAnl] they my seek[VerbalN]
'They were looking for (lit. 'seeking') (~~me~~).' *(McCloskey and Hale 1984:ex.58b)*

Considering the Irish null argument possibilities on the whole, then, putative V-Stranding VP Ellipsis examples will not have the problem of needing a control strategy for ruling out null direct objects—as *was* found to be the case for Hebrew, Swahili, and Ndendeule, as discussed above—except in the limited case of direct objects of Verbal Ns. However, given that subjects are perhaps the only argument that occurs in a larger majority of sentences than direct objects, the possibility of null *subjects* will be a factor in nearly every example tested. We have seen, however, that the presence of a null subject, as well as that of a null complement to a P, of a null possessor, and of a null direct object to a Verbal N, can all be ruled out by using a non-agreeing form of the relevant V, P, or N head. Most crucially, subject person-number combinations which take an *analytic* V form, and thus cannot take a null subject, will be exploited extensively.

Further, we have seen that Irish allows elision of the other elements discussed—complements to Ps, possessor DPs, and so on—*only* when accompanied by an *overt* head bearing agreement. This means that elision of the entire constituent including *both* the agreeing head and its argument will still not be independently possible in this language. Thus, strings in which e.g. *entire* PPs are elided (as opposed to just the DP complement to the P head) cannot be instances of independently null arguments in this language, irrespective of the presence or absence of agreement morphology. Using examples in which VP-internal arguments *other* than the subject are elided will provide a second way to rule out an analysis of independently elided arguments for this language.

It is these two strategies, then, which will be used to ensure that putative V-Stranding VPE

examples cannot instantiate null arguments when such VPE structures are explored further in Chapter 3.

5.3. The existence of putative Irish VPE examples which cannot be instances of independently null VP-internal arguments

As a prelude to the further motivation that Irish has V-Stranding VPE which will be carried out in Chapter 3, and to show that claims of V-Stranding VPE in Irish seem initially to be on track given what has been established for this language thus far, we now conclude this initial discussion of Irish in the same fashion as was done above for Hebrew, Swahili, and Ndendeule. Thus, when we implement the controls just developed to rule out an analysis involving independently null VP-internal arguments in this language, we find that surface strings such as (74) are indeed grammatical:

Irish: ✓Sequence of Post-Verbal Material which *Cannot* Instantiate Independently Null VP-Internal Arguments

(74) Q: Ar cheannaigh siad teach?
Comp[Interrog] *buy[PastAnl]* *they* *house*
'(Did) they buy a house?'

A: Creidim gur cheannaigh.
believe[Pres1sg] *Comp[Past]* *buy[PastAnl]*
lit. 'Believe (I) that bought [~~they a house~~].' *(McCloskey 1991:ex.29)*

In this example, the main V of both the antecedent and target clause is *cheannaigh*, which is the *analytic* Past tense form of *ceannaigh* 'buy'; this fact is made clear by the fleshed-out antecedent clause, in which this V takes the overt subject pronoun *siad* 'they'. This means that the elided subject 'they' in the Answer target clause *cannot* be an instance of an independently null subject, since, as discussed above, null subjects are not possible in Irish with analytic V forms. Furthermore, the second argument elided here is the direct object *teach* 'house. As this is the direct object to a finite

V, it cannot elide independently in this language either.

Thus, the grammaticality of examples like (74) cannot be explained by the presence of independently null arguments. When this finding is combined with the array of data given by McCloskey (1991, 1995), which demonstrate an array of behavioral similarities with English VPE, then, a very solid argument for the existence of V-Stranding VPE in Irish is the result.

6. The Case Against V-Stranding VP Ellipsis in Japanese and Korean

Given the null argument control strategies just shown to be possible for the core languages treated above, it is appropriate to discuss at this point the recent controversy over whether or not V-Stranding VPE exists in Japanese and Korean. This will be done in the present section, with the aim of presenting a case study of a natural class of language data for which V-Stranding VPE can actually be *ruled out* using the diagnostics developed here.

As noted above, it is claimed in Otani and Whitman (1991) (following a suggestion made originally by Huang 1987b, 1988, 1991[29]) that what have been previously treated as examples of null direct objects in Japanese and Korean, as well as in Chinese, are in fact best analyzed as involving V-Stranding VP Ellipsis. This is a significant departure from the earlier literature on such data, which centers on the debate between an A-bar-bound trace analysis (usually with the A-bar element

[29]Chao (1987:134), in work noted to be at a preliminary stage, also presents the following V-Stranding example of putative VPE in Chinese. She claims that "Chinese allows Sluicing, VPE, and NCA [=*Null Complement Anaphora*, –LG]-type structures if the verb is overt" (p. 133):

(i) John xihuan chi fan, Peter ye xihuan.
John like eat rice Peter also like
'John likes (to) eat rice, (and) Peter likes [~~(to) eat rice~~] too.'

Unlike Huang (1987b, 1988, 1991) and Otani and Whitman (1991), however, Chao does not include discussion of how such strings might be generated—refraining in particular from discussing whether or not Chinese has V-to-Infl raising. Also unlike these authors, Chao does not extend the claim to Japanese or Korean.

being a null topic) versus a null pronominal analysis. Within that debate, see, for Japanese, e.g. Huang (1984), Hasegawa (1984-85, 1988), Nakamura (1990), and Kizu (1997); for Korean, see e.g. Huang (1984, 1991), Cole 1987 (citing Yoon 1985), and Cho (2001); and, for Chinese, see e.g. Huang (1984, 1987a, 1991), Xu (1986).

The core data which Huang (1987b, 1988, 1991) suggests might be treatable under a V-Stranding VPE analysis are from (Mandarin) Chinese, while those given by Otani and Whitman (1991) are from Japanese. Nonetheless, all such work states that the claims supported by the language-specific data in each are believed to extend to all of Chinese, Japanese, and Korean. However, as subsequent work on each of the three languages has revealed, the workings of the relevant data in Chinese are quite different from those of Japanese and Korean, warranting Chinese being treated separately. (This is not surprising, given the typologically different nature of Chinese languages as opposed to Japanese and Korean.) I will therefore leave discussion of Chinese to future work (though see the concluding chapter of this thesis for some cursory discussion of the current issues for VPE in this language), focusing just on Japanese and Korean at this point.

I lay out in this section, then, a summary of what I see as the most compelling reasons why Japanese and Korean should *not* be grouped with Hebrew, Irish, Swahili, and Ndendeule in being plausible contenders for having V-Stranding VPE. The core languages treated in this thesis emerge from this chapter as having putative VPE data which are not tenably analyzable as a string of one or more independently elided null arguments. In contrast, the traits of the equivalent data in Japanese and Korean are shown here not only to be fully accounted for under a null argument analysis, but, furthermore, to be *inadequately* treated under a V-Stranding VP Ellipsis analysis. That is, this treatment of Japanese and Korean should be understood as a case study of two languages for

which a *negative* outcome is the result of the application of the diagnostic strategy proposed in this thesis for V-Stranding VPE. It can be noted that Depiante (2000, 2001) gives a similar demonstration—resulting once again in a negative diagnosis for non-English VPE—for the arguments in López (1994, 1999, 2000) that VPE can be found in Spanish and Italian.

The present section is structured as follows. 6.1 presents an overview of the context in which V-Stranding VPE was proposed for Japanese and Korean, as contrasting, for instance, with the types of motivation used for languages like Irish and Hebrew. 6.2 shows why it is true that the types of controls for null arguments which were shown to be possible for the core languages discussed above are not possible in Japanese and Korean, given the wide range of null arguments which are possible in these languages. 6.3 summarizes the details and motivation for Otani and Whitman's (1991) V-Stranding VPE proposal for these languages, outlining in particular the empirical generalizations which must hold true in order for this proposal to be maintained.

Sections 6.4 and 6.5 present empirical evidence against the V-Stranding VPE proposal from Japanese and Korean, taken from work by Hoji (1995, 1998), Park (1997), Oku (1998), Tomioka (1998), and Kim (1999) which was carried out subsequent to the Otani and Whitman (1991) study. The data of 6.4 presents a general argument against the existence of V-Stranding VPE in these languages from the fact that their VP-adverbials, which cannot drop independently, also cannot drop when the rest of the VP is null. The data of 6.5 bear directly on Otani and Whitman's claims, showing that sloppy identity reading availability in Japanese and Korean does not actually correlate with either the patterns of sloppy identity availability in English VPE, nor with a VPE structure being possible more generally. Section 6.6 then summarizes various proposals by these authors which, contrary to assumptions made by Otani and Whitman's work, show that sloppy readings can

be obtained formally not only for null VPs, but for null DPs as well. Finally, section 6.7 presents a summary of the results of this section.

Before continuing, it should be noted that the content of this section is largely a compilation of arguments already extant in the literature on Japanese and Korean, with my own comments and notes inserted at various points. I include this content here for the general purpose of bringing all such arguments together—since many readers may not yet be familiar with all of the research in this body of work,[30] and since it shows Japanese and Korean to provide a useful point of contrast to the results already discussed in this chapter for Hebrew, Swahili, Ndendeule, and Irish. Furthermore, the import of certain individual points made within this body of work become clearer and more compelling, I think, when placed in the larger context of the additional arguments to the same effect made by other authors. However, readers already familiar with this work on Japanese and Korean (including by Huang 1987b, 1988, 1991; Otani and Whitman 1991; Hoji 1995, 1998; Park 1997; Oku 1998; Tomioka 1998; and Kim 1999) may wish to skip this section, moving ahead to this chapter's conclusion and to Chapter 3 at this point.

6.1. Overview of the motivation for V-Stranding VPE in Japanese and Korean

V-Stranding VP Ellipsis was proposed for Japanese and Korean by Otani and Whitman (1991)—following an initial suggestion by Huang (1987b, 1988, 1991)—using motivation which differs in key ways from that used for the core languages of Hebrew, Swahili, and Irish discussed above. Although it has not been discussed explicitly to my knowledge in the literature on these

[30]Rather, many readers may only be familiar with Hoji's (1995, 1998) reply to Otani and Whitman (1991). The additional literature discussed here supports Hoji's arguments, but extends and strengthens them in various ways.

languages, the basic reason for these differences derives from Japanese and Korean being languages in which arguments may freely drop independently under appropriate discourse salience (hence, they are "cool languages", in the terminology of Huang (1984)). Thus, they lack VP-internal elements which are unable to elide unless the rest of the VP is null, in which case (as described for the core languages discussed above) a V-Stranding VPE analysis would present the obvious way to derive such null strings. Work positing VPE in these languages has not contested this fact, but in effect exploits it: positing that examples which would appear to be instances of independently elided null arguments are in fact treatable as VPE, since they allow sloppy identity readings.

The claim that Japanese and Korean have V-Stranding VPE, therefore, hinges entirely on two basic assumptions, both tied to the treatment of such sloppy identity readings. The first is that the pattern of availability for sloppy identity readings in these languages—i.e. the pattern of contexts in which such readings are and are not available—matches the pattern of sloppy identity reading availability in English VP Ellipsis. Assuming this to be true, then, the pattern of availability for Japanese and Korean will automatically follow from the same mechanisms already in place to derive sloppy identity readings in English VPE under a treatment in which they both involve the same type of derivation. The second such assumption is that it is *not* possible to derive sloppy identity readings for Japanese and Korean strings which are analyzed as independently elided null arguments. Thus, if VP Ellipsis is the only type of analysis under which sloppy identity readings can be derived, then examples which display such readings must be treated as cases of VPE.

However, subsequent work on the two languages (Hoji 1995, 1998; Park 1997; Oku 1998; Tomioka 1998; Kim 1999) has revealed that both such assumptions motivating V-Stranding VPE for Japanese and Korean are incorrect. First of all, then, this work shows that a closer look at the

availability of sloppy identity readings in these languages reveals an array of key contrasts with sloppy identity availability in English VPE. This deals a significant blow to the VPE proposal for these languages, since it means that a VPE treatment will actually make *incorrect* predictions as to the availability of sloppy readings in Japanese or Korean, as opposed to English. Secondly, this work shows that, in fact, it *is* possible to derive sloppy identity readings in these languages—and with greater empirical adequacy than is achieved by the VPE treatment—under various sorts of semantically sensitive null argument treatments.

Given this, it seems clear that the relevant Japanese and Korean data are, in fact, best analyzed as cases of independently elided null arguments, just as the original work on these languages cited above has claimed. In this way, then, the data involved in Japanese and Korean provide a point of contrast with those of Hebrew, Irish, Swahili, and Ndendeule discussed above.

6.2. Japanese and Korean VP-internal elements can elide when the rest of the VP is overt

First, then, let us see why it is true that putative VPE structures in Japanese and Korean contrast with those of the core languages treated in this thesis in continuing to have an available alternative null argument analysis which cannot be independently ruled out. The reason for this has to do with the unconstrained nature of null argument strategies in these languages, in which essentially any argument may elide independently, with other arguments remaining overt. Although this situation is has not been discussed explicitly in the literature which debates the need for positing VPE in these languages, pointing it out here will help to make clearer the context within which the VPE proposal was made.

Thus, it is true, on the one hand, that both languages allow null direct objects which are

limited neither to certain types of DPs, nor to the presence of object-V agreement (for Korean, see e.g. Huang 1984, Cole 1987 (citing Yoon 1985), Cho 2001; for Japanese, see e.g. Huang 1984, Hasegawa 1984-85, 1988, Nakamura 1990, Kizu 1997):

Korean: ✓Null Direct Object

(75) Q: Ne nay cemsin mek-ess-ni?
you my lunch eat-Past-Q
'(Did) you eat my lunch?'

A: Ung, mek-ess-e.
yes eat-Past-Dec
'Yes, (I) ate (~~your lunch~~).' *(Cho 2001:ex.13)*

Japanese: ✓Null Direct Object

(76) Ken-wa Erika-o saso-tta. Dan-mo saso-tta.
Ken-TOP Erika-ACC invite-PAST Dan-also invite-PAST
'Ken invited Erika. Dan also invited (~~Erika~~).' *(Tomioka 1998:ex.1)*

However, *non-accusative* internal arguments may also elide independently in these languages, with other VP-internal arguments like the direct object remaining overt. This is shown here, for instance, for Japanese:[31]

Japanese: ✓Null Locative Internal Argument with *Overt* Direct Object

(77) Q: Tamago-o suši-ni no-se-ta no?
egg-ACC sushi-DAT ride-CAUS-PAST Q
'(Did) (you) put (lit. 'cause to ride') egg in the sushi?'

A: Iie, (demo) kyuuri-o no-se-ta yo.
no but cucumber-ACC ride-CAUSE-PAST PARTICLE
'No, (but) (I) put cucumber [$_{\text{DP-dat}}$ ~~in the sushi~~] .'

[31]My thanks to (native Japanese speaker) Naoko Tomioka for providing these examples, as well as (79) below.

(78) Q: Hon-o teeburu-ni no-se-ta no?
book-ACC table-DAT ride-CAUS-PAST Q
'(Did) (you) put (lit. 'cause to ride') (a) book on the table?'

A: Iie, (demo) tegami-o no-se-ta yo.
no but letter-ACC ride-CAUSE-PAST PARTICLE
'No, (but) (I) put (a) letter [$_{\text{DP-dat}}$ ~~on the table~~] .'

This means that the null argument strategies of Japanese and Korean differ from what has been seen for the core languages above in exactly the two ways which were exploited to develop null argument controls for use in putative VPE examples. First, the dropping of VP-internal (and other) arguments in Japanese and Korean lacks the sorts of argument-type-specific restrictions seen above. For example, *any* direct object in these languages can drop licitly, regardless of the particular DP's value for traits like animacy or definiteness, and also in a way not tied to the presence of overt agreement morphology on the selecting V (given that such languages lack agreement morphology on Vs altogether).

Therefore, Japanese and Korean will not have an available null argument control strategy analogous to using animate direct objects in Hebrew (which, we recall, are not licit as targets of null objects in the language), or to using Irish null subjects which occur with analytic, non-agreeing Vs (which, we recall, are illicit as cases of null subjects in the language) for putative VPE examples.

Secondly, there would not appear to be particular types of VP-internal arguments which cannot elide independently in Japanese or Korean: not only can VP-internal *direct objects* independently appear as null, but other types of internal arguments can as well. This means that the second type of null argument control method used for the core languages above will also be unavailable for Japanese and Korean. Thus, a licit instance of putative VPE in which the null VP contains two internal arguments, such as (79) from Japanese, will contrast with analogous examples

in languages like Hebrew, Swahili, or Irish in continuing to have available the multiple null argument analysis schematized in (80), along with the V-Stranding VPE analysis schematized in (81):

Japanese: ✓Null Locative Argument *and* Null Accusative Argument

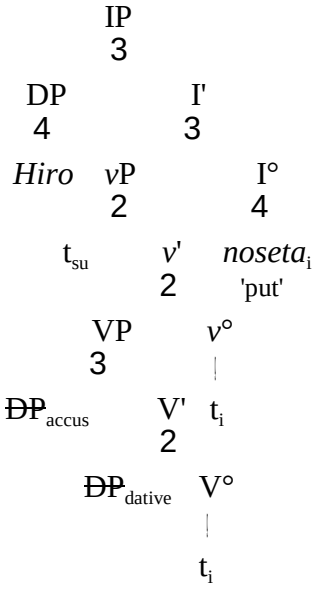
Context: You and I are making sushi with our friend Hiro. With Hiro now in the other room, I notice that there is egg in all of the rolls. I don't like egg, but not everyone knows this. I turn to you and ask:

(79) Q: Tamago-o suši-ni no-se-ta no?
egg-ACC sushi-DAT ride-CAUS-PAST Q
'(Did) (you) put (lit. 'cause to ride') egg in the sushi?'

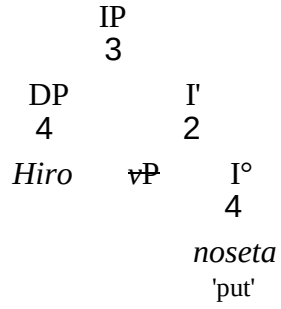
A: Hiro-ga no-se-ta.
Hiro-NOM ride-CAUSE-PAST
'Hiro put ~~[$_{DP\text{-}accus}$ egg]~~ ~~[$_{DP\text{-}dat}$ in the sushi]~~ .'

Two possible Analyses for Surface String (79A)[32]

(80) Multiple Null Arguments:



(81) V-Stranding VPE:



Thus, imaginable V-Stranding VPE examples in these languages, even when containing

[32]I have placed the main V in Infl in both trees here. While this is necessary in order for the V-Stranding VPE analysis in (81) to be possible, it is not needed for the null argument analysis in (80). Thus, the main V in (80) could appear alternatively in the *v*° or V° head, depending upon the ultimate surface position chosen as the best treatment for Japanese main Vs.

multiple arguments, will remain ambiguous between a VPE and a multiple null argument analysis. Furthermore, the head-final nature of these languages, combined with their scrambling possibilities, has meant that it has not been possible to provide conclusive arguments as to whether or not their main Vs raise overtly into the inflectional domain, in what would be string-vacuous movement. In fact, Otani and Whitman (1991:345) suggest that the necessity (in their view) of the V-Stranding VPE analysis for these languages helps to illuminate this issue, providing "confirmation of a novel sort for the existence of V Raising in languages where the effects of this operation are otherwise difficult to discern".

As just laid out, then, Japanese and Korean differ from the core languages discussed in the preceding sections in that (A) it does not appear to be possible to tell, independently of what might be evidence in favor of a VPE analysis, that V-to-Infl raising occurs, and (B) even putative VPE examples in which multiple internal arguments elide will continue to have an available alternative analysis in which each argument has dropped independently, with no obvious way to empirically control for the possibility of such an alternative analysis. Within this background, a proposal that V-Stranding VPE exists in these languages would thus need to involve more subtle facts which, despite the basic analytical ambiguity of the relevant examples between a null argument and VPE analysis, can be accounted for *only* using a VPE account, and not under a null argument treatment.

6.3. The Otani and Whitman (1991) proposal

The claim made by Otani and Whitman (1991), then, is that such facts do exist, and come specifically from the a pattern of sloppy identity reading availability in what would otherwise appear to be cases of just an independently null direct object. Otani and Whitman's proposal derives from

a suggestion originally made by Huang (1987b, 1988:81-84, 1991:63-66), who noted two facts about null direct objects in Chinese. The first, as laid out in Huang (1988:82-83, 1991:64), was that a Chinese example like (82)—which, as should be clear from previous discussion, is ambiguous between having an independently dropped null object and having a V-Stranding VPE structure—has exactly two readings available, one involving "strict identity", and the other "sloppy identity":

Huang (1991), Chinese: ✓Sloppy Identity Reading for Surface Null Object

(82) John kanjian-le tade mama, Mary ye kanjian-le.
John see-PERF his mother Mary also see-PERF
Strict: ✓'John$_i$ saw his$_i$ mother, and Mary also saw [$_{DO}$ ~~his$_i$ mother~~]'
Sloppy: ✓'John saw his mother, and Mary$_j$ also saw [$_{DO}$ ~~her$_j$ mother~~]'
(Huang 1991:ex.31=Huang 1988:ex.21)

Huang notes that the readings available for this example mirror exactly those available for its equivalent English, a case of VPE:

English: ✓Sloppy Identity Reading in VP Ellipsis

(83) John saw his mother, and Mary did too.
Strict: ✓'John$_i$ saw his$_i$ mother, and Mary did [$_{VP}$ ~~see his$_i$ mother~~] too.'
Sloppy: ✓'John saw his mother, and Mary$_j$ did [$_{VP}$ ~~see her$_j$ mother~~] too.'
(Huang 1991:ex.32=Huang 1988:ex.22)

The second point noted by Huang is that such Chinese null objects appear, furthermore, to have the same sort of locality restrictions on the availability of sloppy identity readings as occur in English VPE. Thus, the null material in both the following Chinese example (again ambiguous in principle between a null object and VPE structure) and in its ensuing English VPE counterpart *lack* an available sloppy identity reading:[33]

[33]The third word of example (84), *tade* 'his', appears as *trade* in Huang (1991)'s example (34)—presumably a typo.

Huang (1991), Chinese: 'Non-Local' Sloppy Identity Reading Unavailable

(84) John kanjian-le tade mama, Mary zhidao Bill ye kanjian-le.
John see-PERF his mother Mary know Bill also see-PERF
Strict: ✓'John$_i$ saw his$_i$ mother, and Mary knew that Bill also saw [$_{DO}$ ~~John$_i$'s mother~~].'
Sloppy: * 'John saw his mother, and Mary$_j$ knew that Bill also saw [$_{DO}$ ~~Mary$_j$'s mother~~].'
(Huang 1991:ex.34=Huang 1988:ex.24)

English VPE: 'Non-Local' Sloppy Identity Reading Unavailable

(85) John saw his mother, and Mary knew that Bill did too.
Strict: ✓'John$_i$ saw his$_i$ mother, and Mary knew that Bill did [$_{VP}$ ~~see John$_i$'s mother~~] too.'
Sloppy: * 'John saw his mother, and Mary$_j$ knew that Bill did [$_{VP}$ ~~see Mary$_j$'s mother~~] too.'
(Huang 1991:ex.33=Huang 1988:ex.23)

Thus, in the Chinese null object example in (84), just as in the English VPE example in (85), the possessive portion of the null element in the embedded portion of the target conjunct is able to refer *only* to the subject of the antecedent clause, and not to the subject of the matrix portion of the target clause's conjunct.

Taken together, then, the generalization suggested by the two types of example provided by Huang is that sloppy identity readings are available in Chinese null objects when and only when sloppy identity readings are also available in the equivalent English VPE example. Huang takes a lambda-expression analysis such as Sag (1976) and Williams (1977a) propose for VPE to provide the right kind of explanation for this generalization. Further, he states explicitly that such an analysis will be possible (without additional ad hoc conditions which duplicate a VPE analysis for null objects) *only* if the category which displays sloppy identity readings corresponds to a lambda expression—i.e. to a VP, but *not* to a noun phrase, since noun phrases "denote individuals but not properties". For this reason, he proposes that the Chinese data shown above be treated as involving

a null VP rather than just a null noun phrase.[34]

Otani and Whitman (1991) then pick up Huang's suggestion, noting that the same pattern of sloppy identity readings which Huang showed for Chinese null objects holds for Japanese null objects as well:[35]

Otani and Whitman (1991), Japanese: ✓Sloppy Identity for Surface Null Object

(86) a. John-wa [$_{DO}$ zibun-no tegami-o] sute-ta.
John-TOP self-of letter-ACC discard-PAST
'John$_i$ threw out [$_{DO}$ self$_i$'s letters].'

b. Mary-mo sute-ta.
Mary-also discard-PAST
Strict: ✓'Mary$_j$ also threw out [$_{DO}$ ~~John$_i$'s letters~~].'
Sloppy: ✓'Mary$_j$ also threw out [$_{DO}$ ~~self$_j$'s letters~~].'

(Otani and Whitman 1991:ex.4)

[34]Huang is careful to note that not *all* apparent null object examples in the language should be treated as cases of VPE, since "there are clearly null objects that cannot be so analyzed" (Huang 1991:66). And, indeed, the V-Stranding VPE proposal is given in one section of a paper which discusses an A-bar-bound null object treatment of a range of other types of null objects in Chinese. For those latter cases, Huang's main concern is to argue against a *pro* view, i.e. that "such null objects are better analyzed not as pure pronominals but as null R-expressions, either as variables or as null epithets" (Huang 1991:66).

See Hoji (1998:129, fn.2), however, regarding whether or not it is indeed tenable to assume that the VPE analysis for null arguments can be optional, given the concomitant, and presumably obligatory, V-to-Infl raising which must be assumed under this view.

[35]As noted above, Otani and Whitman's core data come just from Japanese, although they note that they believe the facts reviewed hold in Korean as well. They do, however, present a Korean translation of Japanese (86) which has the same strict and sloppy identity readings available as does its Japanese counterpart:

Otani and Whitman (1991), Korean: ✓Sloppy Identity for Surface Null Object

(i) a. Chelswu-ka [$_{DO}$ caki-uy phyenci-ul] peli-ess-ta.
Chelswu-NOM self-of letter-ACC discard-PAST-DEC
'Chelswu$_i$ threw out [$_{DO}$ self$_i$'s letters].'

b. Yengmi-to peli-ess-ta.
Yengmi-also discard-PAST-DEC
Strict: ✓'Yengmi$_j$ also threw out [$_{DO}$ ~~Chelswu$_i$'s letters~~].'
Sloppy: ✓'Yengmi$_j$ also threw out [$_{DO}$ ~~self$_j$'s letters~~].' *(Otani and Whitman 1991:ex.3)*

Otani and Whitman (1991), Japanese: 'Non-Local' Sloppy Identity Unavailable

(87) a. John$_i$-wa [$_{CP}$ *NY Times*-ga zibun$_i$-no kizi-o inyoosi-te
John-TOP *NY Times-NOM* *self-GEN* *article-ACC* *quote-ing*

i-ru to] kik-ta.
be-IMP *C* *hear-PAST*
'John$_i$ heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ self$_i$'s article]].'

b. Bill-mo [$_{CP}$ *NY Times*-ga inyoosi-te i-ru to] kik-ta.
Bill-also *NY Times-NOM* *quote-ing* *be-IMP* *C* *hear-PAST*
Strict: ✓'Bill$_j$ also heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ ~~John's$_i$ article~~.]]'
Sloppy: * 'Bill$_j$ also heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ ~~self$_j$'s article~~]].'

(Otani and Whitman 1991:ex.26)

Otani and Whitman (1991) assume that the only possible null object treatments are (A) as an instance of a null pronominal, (B) as a null anaphor, as proposed by Xu (1986), or (C) as cases of A-bar-bound traces for which the A-bar element in question is a null topic, and the bound element, furthermore, has anaphoric properties, as proposed by Huang's (1987a) reply to Xu (1986). They assume, like several authors before them, that (A) and (B) are untenable on empirical grounds. This leaves the null topic analysis in (C), which they take to be workable in general for the basic facts of sloppy identity availability—except that sloppy identity readings which are available *without* the presence of an overt topic often become *unavailable* when an overt topic is inserted.

Given that no available null object analysis appears to be workable, then, Otani and Whitman again assume (as Huang was noted to above) that a Sag- (1976) and Williams- (1977a) type lambda predicate analysis is required in order to derive the presence of sloppy identity readings. They also add to the set of motivating data the following Japanese examples, which appear to indicate that sloppy identity readings are only possible when the sort of parallelism required by English VPE is present:

Otani and Whitman (1991), Japanese: Sloppy Identity *Unavailable* When Antecedent- and Target-Clause VPs are Not Parallel

(88) a. [$_{\text{DP-antec}}$ Zibun$_i$-no hatake-no ninzin-ga] Makuguregaa
self-GEN garden-GEN carrot-NOM McGregor

ozisan$_i$-no daikoobutu desi-ta.
Mr.-GEN big.favorite be-PAST
'[$_{\text{DP-antec}}$ The carrots from self$_i$'s garden] were Mr. McGregor$_i$'s big favorite.'

b. Piitaa-mo daisuki desi-ta.
Peter-also very.fond.of be-PAST
Strict: ✓'Peter was also very fond of [$_{\text{DP-target}}$ ~~the carrots from Mr. McGregor$_i$'s garden~~.'
Sloppy: * 'Peter$_j$ was also very fond of [$_{\text{DP-target}}$ ~~the carrots from self$_j$'s garden~~.'
(Otani and Whitman 1991:ex.7)

(89) a. John$_i$-wa hati-zi-ni [$_{\text{PP-antec}}$ zibun$_i$-no apaato-kara] de-ta.
John-TOP 8-o'clock-at self-GEN apartment-from leave-PAST
'John$_i$ at 8 o'clock left [$_{\text{PP-antec}}$ from self$_i$'s apartment].'

b. Bill-wa ku-zi-ni soozisi-hazime-ta.
Bill-TOP 9-o'clock-at clean-start-PAST
Strict: ✓'Bill$_j$ at 9 o'clock started cleaning [$_{\text{DP}}$ ~~John$_i$'s apartment~~].'
Sloppy: *'Bill$_j$ at 9 o'clock started cleaning [$_{\text{DP}}$ ~~self$_j$'s apartment~~].'
(Otani and Whitman 1991:ex.17)

Thus, in (88), the null object in the target clause in (b) corresponds to the *subject* of the antecedent clause in (a). Given that this subject will thus not be part what should be the antecedent VP on a VPE analysis, this will not be a licit example of VPE. With sloppy identity readings assumed to be available only under a VPE analysis, then, the example is only derivable as a null object structure, and thus the absence of sloppy identity readings obtains.

For the second example, (89), the null DP of the target clause, *zibun-no apaato* 'self's apartment', would be marked with accusative case if overt, since the selecting main V, *soozisi* 'clean', takes only an accusative-, but not an ablative-marked internal argument. However, (89a) contains an antecedent for this DP which is *not* accusative, but, rather, is marked with the ablative P *kara*,

'from'. Thus, the relevant material in the antecedent VP is dominated by a PP, and so cannot be copied into the null NP node (i.e. DP, under the DP hypothesis, of which Otani and Whitman do not make use) of the target clause. Only a null object structure, but not a VPE structure, will thus be possible, once again correctly capturing the absence of sloppy identity readings.

The motivation for Otani and Whitman's (1991) proposal of V-Stranding VPE, then, can be summarized as being based on the assumption that (as Huang suggested for Chinese) the pattern of availability for sloppy identity readings in the surface null object structures of these languages matches the pattern of contexts in which a VP Ellipsis analysis is licit. Otani and Whitman make use of this assumption in two senses.

The first, as supported by initial example given in (86-87) above, is the apparent generalization that sloppy identity readings are available in Japanese and Korean null objects *whenever they are also available for English VPE*. Thus, given that sloppy identity readings seem to occur for null material in English only in VPE structures, tying the presence of sloppy identity in Japanese and Korean to the licitness of a VPE structure will capture this apparent parallelism.

The second sense in which this assumption is used is the additional apparent generalization that, in structures for which there is no equivalent English VPE example, sloppy identity is available in Japanese and Korean null objects *only when a V-Stranding VPE structure is possible*. This generalization is supported in Otani and Whitman's work with object examples like (88-89), which lack the antecedent-target VP parallelism which is required for a VPE structure to be licit. Since a VPE analysis is therefore impossible for such examples, their attested lack of sloppy identity readings is captured as well.

6.4. Argument #1 against VPE: Japanese and Korean VP-adverbials can elide neither independently nor in null VPs

Otani and Whitman's proposal has been explored in further detail by Hoji (1995, 1998), Oku (1998), and Tomioka (1998) for Japanese, and by Park (1997) and Kim (1999) for Korean.[36] This body of work presents a range of examples from the two languages which argue quite compellingly against the proposal that they have V-Stranding VPE.

The first such type of example, given by Oku (1998) for Japanese, and by Kim (1997) for Korean, argues against the positing of null VP structures in general for these languages—regardless of the presence of sloppy identity readings. It involves the issue of whether manner adverbials can elide in the structures of these languages which would be treated as cases of V-Stranding VPE under Otani and Whitman's analysis.

The fact that manner adverbials are standardly taken to be adjoined to the VP correlates with the general fact that these elements can optionally elide in English VPE. This can be seen from English examples such as the following, in which taking the manner adverb to have elided along

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[36]Mention of data which is referred to as involving VP Ellipsis in Korean and Japanese also appears in Cho (1996:628-632). This work uses the lack of strict identity readings in such data as a source of evidence that Korean *caki* and Japanese *zibun* are best analyzed as anaphors, rather than as pronominal elements. I can note, however, that the data involved actually contain the Korean and Japanese equivalents of English *do so*: *kule-hayessta* 'so do', used for non-action predicates in Korean (with the counterpart *kulekey-hayessta* used for action predicates), and *soo si-ta* 'so do-Past' in Japanese.

Cho does appear to use these elements as the equivalent of English *do so* rather than VPE, thus translating the target clauses each example as such, and also including discussion of whether or not these Korean and Japanese phrases are genuine counterparts for English *do so*. Nonetheless, examples containing Korean *kule-hayessta* and Japanese *soo si-ta*—along with English *do so*—are referred to in this work as involving "VP ellipsis" or "VP-deletion".

Given the inclusion of the pronominal element *so*, the English *do so* construction has long been known to have markedly different properties from English VP Ellipsis (see e.g. Hankamer and Sag 1976, among others). Along similar lines, Hoji (1997) has shown that Japanese *so sita* 'do so', unlike English VPE, appears to be a case of "deep" rather than "surface" anaphora, in the sense of Hankamer and Sag (1976). It can also be noted that Park (1997:631, fn.3) refers to Korean *kule-ha* as "...a pronominal verb phrase that does not result from verb phrase ellipsis....". Given the inclusion of Korean *kule* 'so' and Japanese *soo* 'so' in these phrases, it appears likely to me that this is indeed the right conclusion.

with the rest of the VP is in fact the primary reading:

English VPE: ✓Null VP Including Manner Adverbial

(90) a. Alan had chopped up the garlic carefully. Heather had as well.
✓Heather had (~~chopped up the garlic carefully~~) as well.

b. Hiro imitated shellfish with great accuracy. Leila did too.
✓Leila did (~~imitate shellfish with great accuracy~~) too.

In contrast, however, Oku (1998) shows that the same ability of manner adverbs to elide when other VP-internal elements are null—as they should be able to, given that they are assumed to be adjoined to the VP—does *not* hold for Japanese. This is shown in (91-92), using the Japanese adverbs *teineini* 'carefully' and *sizukani* 'quietly'. In these examples, Oku states that it is very difficult to construe the target clause as including the meaning of the manner adverb; this has been confirmed in my own initial consultations with native Japanese speakers, who report that the manner adverb's meaning is *not* included in that of the target clause:

Japanese: *Null VP Including a Null Manner Adverbial

(91) Bill-wa kuruma-o teineini arat-ta. John-wa arawa-nakat-ta.
Bill-TOP car-ACC carefully wash-PAST John-TOP wash-not-PAST
'Bill washed the car carefully. John didn't wash (~~the car~~).'
'....*John didn't wash (~~the car carefully~~).' *(Oku 1998:ex.14)*

(92) Bill-wa gohan-o sizukani tabe-ta. John-wa tabe-nakat-ta.
Bill-TOP meal-ACC quietly eat-Past John-TOP eat-not-PAST
'Bill ate the meal quietly. John didn't eat (~~the meal~~).'
'....*John didn't eat (~~the meal quietly~~).' *(Oku 1998:ex.15)*

The meaning of the target clauses of such examples serve instead to negate that the actual action of the core VP occurred. Thus, the target clause of (91) means just that John didn't wash the car at all, rather than that he didn't wash it *carefully*. Similarly, (92)'s target clause means just that John didn't eat the meal *at all*, rather than that he didn't eat it *quietly*.

Park's (1997) work on Korean reports an analogous set of facts for this language. Thus, Park

gives the following examples, which show that the putatively null VPs in this language *cannot* be understood as including the manner or reason adverbial which marks the antecedent VP unless the adverbial is *repeated* overtly in the target clause:

Korean: *Null VP Including a Null Manner or Purpose Adverbial

(93) John-i ppali tali-ko Mary-to *(ppalli) tali-nta
*John-NOM fast run-CONJ Mary-also *(fast) run-Decl*
'John runs fast and Mary runs fast too.' *(Park 1997:ex.4a)*

(94) John-i kulen iwu-lo ttena-ass-ko Mary-to
John-NOM that reason-for leave-PAST-CONJ Mary-also

*(kulen iwu-lo) ttena-ass-ta.
(that reason-for) leave-PAST-DECL
'John left for that reason and Mary left for that reason too.' *(Park 1997:ex.4b)*

In such Korean examples, then, just as was described for the preceding Japanese examples, if the adverbial is not overt in the target clause, then the clause will fail to include its meaning. Thus, the target clause of (93) means just that Mary runs, and not that she runs *fast*, if *ppalli* 'fast' is nonovert. Similarly, the target clause of (94) will mean just that Mary left, but not that Mary left *for that reason*, if *kulen iwu-lo* 'for that reason' is left null.

This fact ties in with the standard assumption, noted by both Oku (1998:305) and Park (1997:632-633), that manner and reason adverbials in these languages—in contrast to argument DPs and temporal or locative adverbials—*cannot* independently be realized as null (Saito 1995, Murasugi 1991). In this sense, if it turned out that these elements *were* able to elide in just the case in which all other VP-internal elements are also null, then we would have an argument in favor of positing VPE for these languages. In such a situation, such adverbials in Japanese and Korean would be the counterparts of non-accusative internal arguments in Hebrew, Swahili, and Irish (and direct objects in Irish), dropping licitly *only* as part of an entire VP which has elided. However, the facts show the

reverse: that even in examples in which (assuming V Raising) the entire VP can be treated as null, such manner and reason adverbials remain *unable* to appear as null. This, then, presents the first key argument against positing V-Stranding VPE for Japanese and Korean.

It can be noted that the elements involved here are *adjuncts* to the VP, and not, for example, internal arguments which are dominated by the innermost verb phrasal node. Thus, this argument against the existence of VPE structures is not as strong as it would be if, say, the indirect objects of Hebrew, or the direct objects of Irish, were found to be unable to elide when the rest of the VP is null: it could still be the posited that for some reason which still requires an explanation Japanese and Korean have VP Ellipsis, but allow it to target *only* the innermost verb phrasal node, constituent, and *not* a higher verb phrasal node which includes an element Chomsky-adjoined to the innermost node.

Nonetheless, the inability of VP-adjuncts to drop in putative VPE structures in Japanese and Korean is surprising under the reasonable hypothesis that—once we abstract away from language-internal factors—VP Ellipsis as instantiated in these languages should have the same fundamental traits as that of English VPE. As we will see in the next subsection, a range of additional differences exist between the relevant data in Japanese and Korean and their English counterparts, namely in the domain of sloppy identity reading availability.

6.5. Argument #2 against VPE: Japanese and Korean sloppy identity reading availability correlates neither with English VPE facts, nor with a VPE structure being possible

The second type of evidence against positing V-Stranding VPE for Japanese and Korean from work subsequent to the Otani and Whitman (1991) study demonstrates that *both* generalizations about sloppy identity readings in these languages—which were summarized above as the basis for Otani and Whitman's (1991) VPE proposal—are empirically incorrect. When such data are taken into account, it becomes clear that positing VPE to capture the sloppy identity facts of these languages would actually create a more severe problem than the one which the proposal was meant to solve. The VPE proposal is thus seen to make an array of incorrect empirical predictions with respect to the actual attested data.

We recall from above that the proposal that Japanese and Korean have V-Stranding VPE hinges on a two-part generalization about sloppy identity reading availability in these languages. This generalization can be summarized as the assumption that Japanese and Korean have sloppy identity readings which obtain for the null objects of these languages if and only if (A) sloppy identity readings are also available for the equivalent in English VPE data, or (B) a V-Stranding VPE structure is possible. Subsequent work by especially Hoji (1995, 1998) points out a number of problems with the Otani and Whitman proposal. However, I will focus here upon the data given by Hoji, as well as by Park (1997), Oku (1998), Tomioka (1998), and Kim (1999), which show specifically that each subpart of the sloppy identity generalization is, in fact, inaccurate.

I will group this evidence into four basic types, each corresponding to a part of the sloppy identity generalization. The first two thus contradict the sub-generalization described as (A) above, namely that Japanese and Korean null objects have sloppy identity readings whenever the equivalent

English VPE examples do. Here, then, there are examples in which (Ai) Japanese and/or Korean *lacks* a sloppy identity reading where the English VPE counterpart *has* one, and in which (Aii) Japanese and/or Korean *has* a sloppy identity reading where the English VPE counterpart *lacks* one.

The second two types of relevant evidence contradict the sub-generalization given as (B) above, that Japanese and Korean allow sloppy identity only when a V-Stranding VPE structure is possible—i.e. even if an English VPE structure is not. These thus involve examples in which (Bi) Japanese and/or Korean *lacks* a sloppy identity reading even though a VPE structure *is* possible, and in which (Bii) Japanese and/or Korean *has* a sloppy identity reading even though a VPE structure *is not* possible.

The four ensuing subsections, 6.5.1 through 6.5.4, present the evidence for each of (Ai), (Aii), (Bi), and (Bii).

6.5.1. Case (Ai): Japanese lacks sloppy identity where English VPE allows it

To demonstrate case (Ai), it must be shown that environments exist in which sloppy identity is *not* available for a Japanese or Korean null object example where it *is* available for the equivalent English VPE example. Hoji (1998)[37], for instance, shows that, as consistent with the sloppy identity

[37]In addition to Hoji's (1998) examples included here to show contrasts in sloppy identity availability in English VPE versus Japanese null objects, Hoji's work also argues for a distinction among the *types* of sloppy identity readings which might be diagnosed. Hoji thus demonstrates that many instances of apparently available sloppy identity readings in Japanese, in particular (as noted by e.g. Otani and Whitman 1991), actually involve "sloppy-like" readings. Hoji views these as distinct from genuine sloppy identity readings, which would be derived via bound variable anaphora (per Sag 1976 and Williams 1977a), or using the somewhat more fine-tuned mechanisms proposed by Fiengo and May (1994).

Instead, Hoji views sloppy-like readings as arising from the fundamentally indefinite nature of Japanese null arguments. A range of possible readings is possible, therefore, for a given null argument. One such imaginable reading will be *compatible* with the referent involved in a true case of sloppy identity, but such potential *compatibility* is taken to be distinct from the conditions involved in genuine sloppy identity. Thus, Hoji shows sloppy-like readings to arise even when a null object's antecedent is *not* a type of DP which can be bound under bound variable anaphora—i.e. when

(continued...)

generalization, a sloppy(-like) reading is available in an example such as (95):[38]

Japanese Null Obj: ✓Sloppy Identity *(=English VPE)*

(95) A: John-ga zibunzisin-o suisens-ita. Bill-mo suisens-ita.
John-NOM self-ACC recommend-PAST Bill-also recommend-PAST
'John$_i$ recommended himself$_i$. ✓Bill$_j$ also recommended (~~himself$_j$~~)' *(Hoji 1998:ex.33)*

Here, the null object's antecedent is a reflexive DP. (96-97), also show that at least some Japanese examples also allow sloppy readings for null objects whose antecedent DP consists of a referential N which takes a reflexive possessor:

Japanese Null Obj: ✓Sloppy Identity *(=English VPE)*

(96) Ken-wa zibun-no uti-o ut-ta. Erika-mo ut-ta.
Ken-TOP self-GEN house-ACC sell-Past Erika-also sell-Past
'Ken$_i$ sold self$_i$'s house. ✓Erika$_j$ sold (~~self$_j$'s house~~) too.' *(Tomioka 1998:ex.3)*

(97) John-ga zibun-no kuruma-o arat-ta. Bill-mo arat-ta.
John-NOM self-GEN car-ACC wash-PAST Bill-also wash-PAST
'John$_i$ washed self$_i$'s car. ✓Bill$_j$ washed (~~self$_j$'s car~~) too.' *(Hoji 1998:ex.35)*

However, Hoji also shows that using the same structure as that of (95) above, but changing the main V of the antecedent- and target-clauses from (95)'s *suisensita* 'recommended' to *nagusameta* 'consoled', causes the sloppy(-like) reading to become *unavailable*:[39]

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[37](...continued)
it is e.g. a Name, as opposed to e.g. a reflexive like *zibun(zisin)* 'self' or a reciprocal like *otagi* 'each other'.

The distinction between sloppy and sloppy-like readings is an important one for the ultimate treatment of such readings in Japanese (and likely Korean) null objects. However, for present purposes and space considerations, I will concentrate less on this distinction than on the basic demonstration that the set of example types in which Japanese and Korean display such readings is distinct from that in which English VPE does, or in which, indeed, a VPE structure is even possible.

[38]To aid clarity for the long list of Japanese and Korean examples which are about to be presented, I will mark the title of each example as "(=English VPE)" when its sloppy identity availability value matches that of the equivalent English example, as "(≠English VPE)" when its sloppy identity availability indicated does *not* match that of the equivalent English VPE example, and so on.

[39]While Hoji (1998:131) explicitly states that a sloppy reading, with the meaning 'Bill$_j$ consoled himself$_j$ too', is unavailable for the target clause in (98), he does not explicitly state the strict reading to be grammatical. I have (continued...)

Japanese Null Obj: *Sloppy Identity *(≠ English VPE)*

(98) A: John-wa zibun(zisin)-o nagusame-ta.
John-TOP self-ACC console-Past
'John$_i$ consoled himself$_i$.'

B: Bill-mo *ec* nagusame-ta.
Bill-also console-Past
Strict: ✓'Bill$_j$ consoled (~~John$_i$~~) too.'
Sloppy: *'Bill$_j$ consoled (~~himself$_j$~~) too.' *(Hoji 1998:ex.12A-B)*

Hoji (1998) also shows that null objects to the main V *nagusameta* 'consoled' are equally lacking in sloppy reading when taking a reciprocal antecedent:

Japanese Null Obj: *Sloppy Identity *(≠English VPE)*

(99) A: Subete-no nihonzin huuhu-ga otagi-o nagusame-ta.
all-GEN Japanese couple-NOM each.other-ACC console-PAST
'Every Japanese couple$_i$ consoled each other$_i$.' (i.e. for each Japanese couple, each couple member consoled the other.)

B: Subete-no amerikazin huuhu-mo nagusame-ta.
all-GEN American couple-also console-PAST
Strict: ✓'Every American couple$_j$ consoled (~~the Japanese couple$_i$~~) too.'
Sloppy: *'Every American couple$_j$ consoled (~~each other$_j$~~) too.'
(Hoji 1998:ex.14A-B)

Contrasts of this sort in sloppy identity availability within different main V and antecedent DP types are clearly not a trait of English VPE. Thus, regardless of the choice of main V used, the analogous English VPE examples systematically have an available sloppy reading:

English VPE: ✓Sloppy Identity

(100) John recommended himself, and Bill did too.
Sloppy: ✓'...and Bill$_j$ did (~~recommend himself$_j$~~) too.'

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[39](...continued)
nonetheless shown the latter to be good here, inferring this from the context of the discussion in which Hoji presents this example.

Note also that Oku (1998:313, fn.10) asserts that this example *does* indeed have a possible sloppy reading, although he agrees with Hoji that this reading is more difficult to get than with Vs such as *suisensuru* 'recommend'.

(101) John consoled himself, and Bill did too.
Sloppy: ✓'...and Bill$_j$ did (~~console himself$_j$~~) too.'

(102) Every Japanese couple consoled each other, and every American couple did too.
Sloppy: ✓'...and every American couple$_j$ did (~~console each other$_j$~~) too' (i.e. within each American couple, each couple member consoled the other

Further, Hoji points out that even examples which use the main V *suisensita* 'recommended'—which was shown above in contexts in which its null complement *allowed* a sloppy reading—are sometimes *lacking* in a sloppy reading. He presents as evidence examples such as (103-104):

Japanese Null Obj: *Sloppy Identity *(≠English VPE)*
(103) A: Subete-no nihonzin huuhu-ga onazi gakusei-o suisens-ita.
all-GEN Japanese couple-NOM same student-ACC recommend-PAST
'Every Japanese couple recommended [$_{\text{DP-antec}}$ the same student].' (i.e. for each Japanese couple, both couple members recommended the same student.)

B: Subete-no amerikazin huuhu-mo suisens-ita.
all-GEN American couple-also recommend-PAST
Sloppy: *'Every American couple recommended (~~the same student~~), too.' (i.e. *for each American couple, both couple members recommended the same student.)
(Hoji 1998:ex.25)

Japanese Null Obj: *Sloppy Identity *(≠English VPE)*
(104) A: Subete-no nihonzin huuhu-ga betubetu-no gakusei-o
all-GEN Japanese couple-NOM different-ACC student-ACC
suisens-ita.
recommend-PAST
'Every Japanese couple recommended a different student.' (i.e. for each Japanese couple, each couple member recommended a different student.)

B: Subete-no amerikazin huuhu-mo suisens-ita.
all-GEN American couple-also recommend-PAST
Sloppy: *'Every American couple recommended (~~a different student~~), too.' (i.e. *for each American couple, each couple member recommended a different student.)
(Hoji 1998:ex.26)

Once again, the equivalent English VPE examples contrast in *allowing* sloppy identity:

English VPE: ✓Sloppy Identity

(105) Every Japanese couple recommended the same student, and every American couple did too.

(106) Every Japanese couple recommended a different student, and every American couple did too.

Thus, for the VPE target clause of (105), a sloppy reading is available in which, within each American couple, if couple member *one* recommended student *x*, then couple member *two* recommended *x* also, and vice-versa—though the student recommended by the American couple could well be different from the one recommended by any given Japanese couple. Similarly, in (106), the target clause has a possible sloppy reading in which, within each American couple, if couple member *one* recommended student *x*, then couple member *two* could have recommended any student except *x*, and vice-versa—though the two distinct students recommended by a given American couple could well match the set of two distinct students recommended by a given Japanese couple.

These examples thus show that, although sloppy identity readings are sometimes available when the English VPE equivalent displays them as well, this is not always the case. We have seen, first, that certain Japanese examples which use the V *nagusameta* 'console' do not allow sloppy identity when their English counterpart does, and that this is also the case for some—though not all—uses of Japanese *suisensita* 'recommended'.[40] Whatever the reason may be for the lack of sloppy

[40]Hoji (1998:150) notes as well that the equivalent of (95) above—still using the V *suisensita* 'recommended'—also comes to lack the sloppy-like reading when its subject Name is replaced with a quantified DP. Although Hoji does not give the Japanese example, that I can see, its English equivalent is given on p.150, example (55a): *Every teacher recommended himself; every student did too.*

identity in some of the examples seen here,[41] what is important for present purposes is the lack of full parallelism between sloppy identity in Japanese null object examples and their English VPE counterparts.

6.5.2. Case (Aii): Japanese allows sloppy identity where English VPE does not

That sloppy identity availability is not parallel between the Japanese null objects and English VPE is seen further in examples described as type (Aii) above, in which Japanese *allows* a sloppy reading where the equivalent English VPE example does not. The first such type of example involves non-local sloppy identity. We recall from above that Otani and Whitman gave their example (26), shown as (87) above and repeated here, as evidence that Japanese null objects behave on a par with English VPE in this respect:

Otani and Whitman (1991), Japanese: 'Non-Local' Sloppy Identity Unavailable

(87) a. John$_i$-wa [$_{CP}$ *NY Times*-ga zibun$_i$-no kizi-o inyoosi-te
John-TOP *NY Times-NOM* *self-GEN* *article-ACC* *quote-ing*

i-ru to] kik-ta.
be-IMP *C* *hear-PAST*
'John$_i$ heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ self$_i$'s article]].'

b. Bill-mo [$_{CP}$ *NY Times*-ga inyoosi-te i-ru to] kik-ta.
Bill-also *NY Times-NOM* *quote-ing* *be-IMP* *C* *hear-PAST*
Strict: ✓'Bill$_j$ also heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ ~~John's$_i$ article~~.]]'
Sloppy: * 'Bill$_j$ also heard [$_{CP}$ that the *NY Times* is quoting [$_{DO}$ ~~self$_j$'s article~~]].'

(Otani and Whitman 1991:ex.26)

However, as Hoji (1998:129, fn. 1) notes, Fiengo and May (1994:106) have observed that 'non-local' sloppy identity is actually *available* in English VPE examples whose antecedent and target sentences

[41]Hoji (1998:139, fn.14), citing Hoji (1995:268-269) gives some thoughts on the possible cause for the contrast between at least the *suisens* 'recommend' versus *nagusame* 'console' examples.

are structurally parallel in the way shown in (87)—so that the VP-internal null material and its antecedent-clause counterpart elements *both* correspond to anaphors within an embedded clause.[42] (87) thus does not present the sort of counterpart to English examples in which non-local sloppy identity is not possible that Otani and Whitman intended.

As an alternative, Hoji (1998:129) presents what is shown here as (107) instead, in which *only* the target clause's null material is within an embedded clause, with its counterpart in the antecedent clause appearing in just a simple sentence. The unavailability of non-local sloppy identity in such structures is *not* disputed for English VPE (see e.g. Fiengo and May 1994:105), and Hoji shows that non-local sloppy identity can appear at first to be equally available in Japanese:[43]

[42]Fiengo and May (1994:106) thus present (i) (their (37)), in which sloppy identity is clearly available:

(i) A: I didn't know that Bill was a bigamist.
B: Mary just said he's married to her, and Sally did too.
Sloppy: ✓...and Sally$_j$ did (~~just say he's married to her$_j$~~) too

Similarly, Oku's (1998:303) examples (11-12) and Kim's (1999:264) example (19) show that sloppy identity is also available for Japanese and Korean null objects, respectively, in such structures.

[43]It can be noted that Hoji's alternative example is of the same structural type—with an antecedent simple sentence and a target clause which is embedded—as Huang's (e.g. 1988, 1991) original Chinese example which Otani and Whitman presumably meant to replicate in Japanese:

(i) John kanjian-le tade mama, Mary zhidao Bill ye kanjian-le.
John see-PERF his mother Mary know Bill also see-PERF
Strict: ✓'John$_i$ saw his$_i$ mother, and Mary knew that Bill also saw [$_{DO}$ ~~John$_i$'s mother~~].'
Non-Local Sloppy: *'John saw his mother, and Mary$_j$ knew that Bill also saw [$_{DO}$ ~~Mary$_j$'s mother~~].'
(Huang 1991:ex.34=Huang 1988:ex.24)

Hoji (1998:ex.8), Japanese: ✓Non-Local Sloppy Identity *(=English VPE)*

(107) A: John-wa zibun-no gakusei-o suisens-ita.
John-TOP self-GEN student-ACC recommend-Past
'John$_i$ recommended self$_i$'s student.'

B: Mary-wa [$_{CP}$ Bill-mo suisens-ita to] omottei-ta.
Mary-TOP Bill-also recommend-Past that think-Past
Strict: ✓'Mary thought that Bill recommended (~~John's student~~) too.'
Local Sloppy: ✓'Mary thought that Bill$_j$ recommended (~~self$_j$'s student~~) too.'
Nonlocal Sloppy: *'Mary$_k$ thought that Bill recommended (~~her$_k$ student~~) too.'

However, Hoji (1998:136) then shows that this parallel behavior between English VPE and Japanese null object sloppy identity availability is, in fact, only apparent. Strikingly, Hoji shows that sloppy identity is *available* in the identical Japanese example when a small change is made: namely, when the *-mo* 'also' marker on the target clause's embedded subject is replaced with the nominative marker *-ga*:

Japanese: ✓Non-Local Sloppy Identity with *-ga* 'NOM' replacing *-mo* 'also'
(≠English VPE)

(108) A: [=Antecedent clause (107A) above.]

B: Mary-wa [$_{CP}$ Bill-**ga** suisens-ita to] omotteita.
*Mary-TOP Bill-**NOM** recommend-Past that think-Past*
Nonlocal Sloppy: ✓'Mary$_k$ thought that Bill recommended (~~her$_k$ student~~).'

(Hoji 1998:ex.30)

Here, then, we have a case in which sloppy identity is undisputedly blocked in such non-local environments in English VPE, but is shown to be available one type of Japanese null object example.

It seems, then, that the absence of non-local sloppy identity in Japanese examples like (107) has to do not with the fact of non-locality, but, rather, with an effect produced by the Japanese *-mo* 'also' marker. Additional examples to this effect are presented immediately below. First, however, we can note Hoji's observation that Japanese null objects continue to have sloppy-like readings even

when their antecedents consist of DPs such as Names:

Japanese Null Obj with [$_{DP}$ Name] or [$_{DP}$ Name's N] Antecedent: ✓Sloppy Identity
(≠English VPE)

(109) John-ga John-o suisens-ita. Bill-mo suisens-ita.
John-NOM John-ACC recommend-PAST Bill-also recommend-PAST
'John$_i$ recommended John$_i$. ✓Bill$_j$ also recommended (~~Billj~~).' *(Hoji 1998:ex.47)*

(110) John-ga John-no kuruma-o arat-ta. Bill-mo suisens-ita.
John-NOM John-GEN car-ACC wash-PAST Bill-also wash-PAST
'John$_i$ washed [John$_i$'s car]. ✓Bill$_j$ also washed (~~Bill$_j$'s car~~).' *(Hoji 1998:ex.48)*

In the target clauses of examples like (109-110), no element is actually present which can translate to a semantic variable and thus give rise to a sloppy identity reading in English VPE, as is seen from the following counterpart examples:

English VPE with [DP Name] or [DP Name's N] as Antecedent VP's DO: *Sloppy Identity

(111) A: Many of the committee members recommended John for the job, and many others recommended Bill. In fact, among the first group, even [$_{\text{Antecedent-Sentence}}$ JOHN$_i$ recommended John$_i$].

B: Yes— and BILL did too.
Strict: ✓'Bill$_j$ did (~~recommend John$_i$~~) too.'
Sloppy: *'Bill$_j$ did (~~recommend Bill$_j$~~) too.'

(112) A: Many of our friends were washing John's car, and many others were washing Bill's car. In fact, among the first group, even [$_{\text{Antecedent-Sentence}}$ JOHN$_i$ was washing John$_i$'s car].

B: Yes, and Bill was too.
Strict: ✓'Bill$_j$ was (~~washing John$_i$'s car~~) too.'
Sloppy: *'Bill$_j$ was (~~washing Bill$_j$'s car~~) too.'

(111-112) display the usual strain which arises when a Name or other R-expression is bound by an instance of the identical R-expression. Nonetheless, it seems clear, I think, that, to the extent to which the discourses in the two examples are wellformed, the strict identity reading is obligatory for the target clause of each. Thus, the sloppy readings for such target clauses—as seems especially

clear for (111)—are strongly ungrammatical.

This contrast seems especially revealing in terms of the nature of Japanese null object sloppy identity readings. That Japanese null objects are shown here to allow a sloppy reading even when their antecedent is not the sort of element which would translate into an expression containing a semantic variable thus sheds particular light on the workings of the Japanese null object construction as it contrasts with English VPE. This, in turn, lends support the nature of the alternative semantic analyses which have been proposed by the work on Japanese subsequent to Otani and Whitman (1991). This has included proposals that Japanese null objects are semantically inherently indefinite (Hoji 1998), or are semantically pronouns of laziness (Tomioka 1998).

Finally, and most strikingly, it is possible to combine the results just given for Japanese (111-112) with the contrast in non-local sloppy identity availability from (107-108) above which turned on the use of *-mo* 'also' versus *-ga* 'NOM'. Thus, Hoji shows that the same contrast in the availability of non-local sloppy identity arises even when what appeared in earlier examples as an anaphoric element such as *zibun* 'self' is replaced with a referential N such as a Name.[44]

Japanese Null Obj with [$_{DP}$ Name's N] Antecedent: *Non-Local Sloppy Identity
(=English VPE)

(113) A: John-ga John-no gakusei-o suisens-ita.
John-NOM John-GEN student-ACC recommend-Past
'John$_i$ recommended John$_i$'s student.'

[44]What I show here as example (114) is not actually listed among the data presented in Hoji's work. However, the text accompanying example (113), which is Hoji's (1998) (53), states that the non-local sloppy reading indeed becomes available when its *-mo* 'also' is replaced with *-ga* 'NOM'; see Hoji (1998:149).

B: Mary-wa [$_{CP}$ Bill-<u>mo</u> suisens-ita to] omotte-ita.
Mary-TOP *Bill-<u>also</u>* *recommend-Past* *that* *think-Past*
Strict: ✓'Mary thought that Bill also recommended (~~John's student~~).'
Local Sloppy: ✓'Mary thought that Bill$_j$ also recommended (~~Bill$_j$'s student~~).'
<u>Nonlocal</u> Sloppy: *'Mary$_k$ thought that Bill also recommended (~~Mary$_k$'s student~~).'
(Hoji 1998:ex.53)

Japanese Null Obj with [$_{DP}$ Name's N] Antecedent: ✓Non-Local Sloppy Identity
(≠English VPE)

(114) A: [=Antecedent clause (113A) above.]

B: Mary-wa [$_{CP}$ Bill-**ga** suisens-ita to] omotte-ita.
Mary-TOP *Bill-**NOM*** *recommend-Past* *that* *think-Past*
<u>Nonlocal</u> Sloppy: ✓'Mary$_k$ thought that Bill recommended (~~Mary$_k$'s student~~).'

It is striking that sloppy identity is possible even when the antecedent of the Japanese null object is a referential rather than anaphoric element—a situation in which English VPE clearly does not allow sloppy identity. Moreover, we see here that using the *-mo* 'also' marker rather than *-ga* 'NOM' on the embedded target clause's subject again causes the non-local sloppy reading to become unavailable. This suggests not only that the Japanese locality effects are tied more to the presence of *-mo* versus *-ga* than to a lack of locality, but too that the workings of genuine sloppy identity which arises when English VPE displays such readings are *not* at work in the Japanese construction.

6.5.3. Case (Bi): Korean lacks sloppy identity where a VPE structure is possible

We have just seen a set of facts, largely from Hoji's (1998) work, which were just shown to demonstrate the ways in which Japanese null objects' sloppy identity possibilities differ from those of the equivalent English VPE examples. Moving outside the domain of English VPE, it can also be seen that Japanese and Korean lack sloppy identity where a V-Stranding VPE structure is possible, even though English VPE is not (generally because the main Vs of the antecedent- and

target-clauses are non-identical). Additionally, a number of examples show that these languages allow sloppy identity readings in configurations in which even a V-Stranding VPE structure is *not* possible—since one or both of the null elements giving rise to sloppy identity and the antecedent of such null elements are either not within a VP, or do not comprise the *entirety* of a VP.

In the first group, it turns out that Otani and Whitman's claim that sloppy identity is impossible when the antecedent- and target-clause VPs are non-parallel—so that a V-Stranding VPE structure is not possible—does not hold systematically. Thus, we recall that one of the examples which Otani and Whitman gave as support for this claim was (89), repeated here:

Otani and Whitman (1991), Japanese: *Sloppy Identity with Non-Parallel Antecedent and Target VPs *(*VPE Structure)*

Null DP's Case Doesn't Match the Case on its Antecedent:

(89) a. John$_i$-wa hati-zi-ni [$_{PP\text{-}antec}$ zibun$_i$-no apaato-kara] de-ta.
John-TOP 8-o'clock-at self-GEN apartment-from leave-PAST
'John$_i$ at 8 o'clock left [$_{PP\text{-}antec}$ from self$_i$'s apartment].'

b. Bill-wa ku-zi-ni soozisi-hazime-ta.
Bill-TOP 9-o'clock-at clean-start-PAST
Strict: ✓'Bill$_j$ at 9 o'clock started cleaning [$_{DP}$ ~~John$_i$'s apartment~~].'
Sloppy: *'Bill$_j$ at 9 o'clock started cleaning [$_{DP}$ ~~self$_j$'s apartment~~].'

(Otani and Whitman 1991:ex.17)

In this example, the non-parallelism of the antecedent and target VPs arises due to the case-marking present on the null DP and its antecedent. The null DP thus corresponds to an accusative-marked direct object, but its antecedent is actually an ablative-marked PP.

However, Kim (1999:261) shows that, in Korean, the V *ttena* 'leave' can take *either* an ablative PP argument (as in Japanese), *or* an accusative argument. Thus, it is possible to replicate Otani and Whitman's Japanese example from (89) in Korean using accusative-marked DPs for *both* the antecedent- and target-clause elements. When this is done, a sloppy identity reading *remains*

illformed, showing that the case-mismatch in the Japanese example cannot be the cause of its lack of sloppy identity:

Korean, Parallel Antecedent and Target VPs: *Sloppy Identity *(✓VPE Structure)*
Null DP's Case *Matches* Case of its Antecedent:

(115) a. John-un yetelp-si-ey [$_{Antec}$ caki-uy apaatu-lul] ttena-ss-ta.
John-TOP 8-o'clock-at self-GEN apartment-ACC leave-PAST-IND
'John$_i$ at 8 o'clock left his$_i$ apartment.'

b. Bill-un ahop-si-ey chengsohaki-sicakhay-ss-ta.
Bill-TOP 9-o'clock-at clean-start-PAST-IND
Strict: ✓'Bill started cleaning (~~John$_i$'s apartment~~) at 9 o'clock.'
Sloppy: ??'Bill$_j$ started cleaning (~~self$_j$'s apartment~~) at 9 o'clock.'

(Kim 1999:ex.12)

Here, then, the null elements within the antecedent- and target-clause VPs *are* parallel. The main Vs of these clause are different, but this should be possible, in principle, for V-Stranding VPE (as discussed at length in Chapter 4 of this thesis), since such Vs are not part of the VPs held parallel. Since a VPE analysis is possible and a sloppy identity reading is not, the lack of a sloppy identity reading for this example must *not* be due to the non-availability of a VPE analysis. And positing VPE for such examples will incorrectly predict that a sloppy identity reading should be available, contrary to fact.

As the next subsection shows, the reverse of this finding for Otani and Whitman's (89) is also available—thus, examples exist in both Japanese and Korean which are as lacking in antecedent- and target-VP parallelism as is Otani and Whitman's (89), but in which sloppy identity readings *do* surface. We turn now to such examples, as well as to others from Japanese and Korean in which a V-Stranding VPE structure is not possible, but sloppy identity readings are found nonetheless.

6.5.4. Case (Bii): Japanese and Korean allow sloppy identity where a VPE structure is impossible

Continuing to focus on Otani and Whitman's example (89) for the moment, Kim also shows that *non-parallel* examples can be found in Korean which have exactly the sort of case-mismatch which Otani and Whitman used for Japanese to block the possibility of a VPE analysis, but in which a sloppy reading *is* available:

Korean, Non-Parallel Antecedent and Target-Clause VPs: ✓Sloppy Identity
(*VPE Structure)

Null DP's Case Doesn't Match the Case of its Antecedent:

(116) a. John-un [$_{Antec}$ caki-uy kay]-wa/*lul kotcal sanpo-lul
*John-TOP self-GEN dog-COMIT/*ACC often walk-ACC*

ha-n-ta.
take-PRES-IND
'John$_i$ often takes a walk with his$_i$ dog.'

b. Kulena Bill-un kotcal ttayli-n-ta.
but Bill-TOP often beat-PRES-IND
Strict: ?'But Bill often beats (~~John$_i$~~'s dog).'
Sloppy: ✓'But Bill$_j$ often beats (~~self$_j$~~'s dog).' *(Kim 1999:ex.13)*

This example is thus the direct counterpart of Otani and Whitman's (89). The Korean V *ttayli* 'beat' used in the target clause here can take *only* an accusative internal argument, and not a comitative argument as would be necessary for the case of the null DP to match that of its counterpart element in the antecedent clause (Kim 1999:262). Nonetheless, a sloppy identity reading *is* available (and is, in fact, more acceptable than a strict reading), contrary to the sloppy identity generalization. Thus, positing VPE to capture the range of available sloppy identity readings for Japanese and Korean will incorrectly predict that examples like Korean (116) should lack a sloppy identity reading.

Tomioka (1998) shows that examples on a par with Kim's (1999) Korean example are also available from Japanese. He gives the following, in which a case-mismatch still appears between

the null DP and its antecedent, with sloppy identity nonetheless available:

Japanese, Non-Parallel Antecedent and Target VPs: ✓Sloppy Identity *(*VPE Structure)*

Null DP's Case Doesn't Match the Case on its Antecedent:
Context: John and Bill each had the same chore of cleaning their own apartment as soon as possible.

(117) John-ga yatto [$_{\text{PP-Antec}}$ zibun-no apaato-made] tadoritsui-ta
John-NOM finally self-GEN apartment-up.to reach-PAST

sonokoro, Bill-wa sudeni soozisi-hazime-tei-ta.
that.time Bill-TOP already clean-begin-be-PAST
Sloppy: ✓'By the time John$_i$ finally arrived at his apartment, Bill$_j$ had already begun cleaning (~~his$_j$ apartment~~).' *(Tomioka 1998:ex.13)*

The other example which Otani and Whitman (1991) used to support the claim that sloppy identity is not possible in Japanese structures which lack the antecedent- and target-clause parallelism required by VPE, is (88) from above, repeated here:

Otani and Whitman (1991), Japanese: *Sloppy Identity with Non-Parallel Antecedent and Target VPs *(*VPE Structure)*

Null DP's Antecedent is a Subject:

(88) a. [$_{\text{Su-antec}}$ Zibun$_i$-no hatake-no ninzin-ga] Makuguregaa
self-GEN garden-GEN carrot-NOM McGregor

ozisan$_i$-no daikoobutu desi-ta.
Mr.-GEN big.favorite be-PAST
'[$_{\text{Su-antec}}$ The carrots from self$_i$'s garden] were Mr. McGregor$_i$'s big favorite.'

b. Piitaa-mo daisuki desi-ta.
Peter-also very.fond.of be-PAST
Strict: ✓'Peter was also very fond of [$_{\text{DP-target}}$ ~~the carrots from Mr. McGregor$_i$'s garden~~].'
Sloppy: * 'Peter$_j$ was also very fond of [$_{\text{DP-target}}$ ~~the carrots from self$_j$'s garden~~].'
(Otani and Whitman 1991:ex.7)

Thus, in this example, the null DP within the target clause VP takes an antecedent which is not within the antecedent sentence's VP at all, but is rather the latter's *subject*.

Once again, however, the generalization suggested by this example can be seen not to be systematic. Thus, Tomioka (1998:520) has noted that the null object which lacks a sloppy identity reading in Otani and Whitman's example shown in (88) here takes an indefinite antecedent DP whose interpretation is *generic*. He shows that sloppy identity actually becomes available in a minimally different example in which this antecedent DP is changed to an indefinite with an *existential* interpretation:

Japanese, Non-Parallel Antecedent and Target VPs: ✓Sloppy Identity *(*VPE Structure)*

Null DP's Antecedent is a Subject:

(118) a. [$_{\text{Su-Antec}}$ Zibun-no hatake-no ninjin-ga] Magguregaa
self-GEN garden-GEN carrot-NOM McGregor

ozisan-kara-no okurimono desi-ta.
Mr.-from-GEN gift be-PAST

'[$_{\text{Su-Antec}}$ (Some) carrots from self$_i$'s garden] were the gift (for us) from Mr. McGregor$_i$.'

b. Piitaa-mo okutte-kuremasi-ta.
Peter-also send-give-PAST

Sloppy: ✓'Peter$_j$ also sent (us) (~~some carrots from self$_j$'s garden~~).'

(Tomioka 1998:ex.12)

Here, just as in Otani and Whitman's example given above, the sort of VP-parallelism necessary for VPE continues to be absent, since the null object's antecedent DP remains the *subject* of the antecedent clause. Since a VPE structure would thus be illformed here, tying sloppy identity readings in Japanese to the presence of VPE would incorrectly predict that this example should lack a sloppy identity reading, contrary to fact.

In Tomioka's example just discussed, only the *antecedent* of the VP-internal null object was a subject. However, Oku (1998:300) has shown that sloppy readings are available in Japanese when *both* the null element and its antecedent are subjects:

Japanese: ✓Sloppy Identity in a Null *Subject* Structure *(*VPE Structure)*

(119) a. Mary-wa [$_{CP}$ zibun-no teian-ga saiyo-sare-ru-to]
Mary-TOP self-GEN proposal-NOM accept-PASV-PRES-COMP

omotteiru.
think
'Mary$_i$ thinks [$_{CP}$ that her$_i$ proposal will be accepted].'

b. John-mo [$_{CP}$ *ec* saiyo-sare-ru-to] omotteiru.
John-also accept-PASV-PRES-COMP think
Strict: ✓'John also thinks [$_{CP}$ that (~~Mary$_i$'s proposal~~) will be accepted].'
Sloppy: ✓'John$_j$ also thinks [$_{CP}$ that (~~self$_j$'s proposal~~) will be accepted].'
(Oku 1998:ex.3)

(120) a. Bill-wa [$_{CP}$ zibun-no gakusei-ga siken-ni toot-ta-to]
Bill-TOP self-GEN student-NOM exam-DAT pass-PAST-COMP

omotteiru.
think
'Bill$_i$ thinks [$_{CP}$ that his$_i$ student passed the exam].'

b. John-mo [$_{CP}$ *ec* siken-ni toot-ta-to] omotteiru.
John-also exam-DAT pass-PAST-COMP think
Strict: ✓'John also thinks [$_{CP}$ that (~~Bill$_i$'s student~~) passed the exam].'
Sloppy: ✓'Johnj also thinks [$_{CP}$ that (~~self$_j$'s student~~) passed the exam].'
(Oku 1998:ex.4)

Strikingly, then, the element which gives rise to a sloppy reading in these examples is the null *subject* of an embedded clause, a result which is entirely unexpected under a treatment in which sloppy identity readings obtain only in VPE configurations.

Oku (1998:312-313, fn. 4) does note that a VPE treatment of such examples might be saved by a view under which Japanese subjects can remain VP-internal, as argued by e.g. Kuroda (1988) and Fukui and Speas (1986). However, from what I can see, such a view would capture the sloppy identity reading *only* in example (119), since in that case the subject is the only VP-internal element (given that the main V, under a VPE analysis, will have raised out of the VP by hypothesis). In

(120), in contrast, what would be the embedded target VP under a VPE analysis contains not only the null subject, but the overt dative internal argument *siken-ni* 'exam-DAT' as well. This latter example, then, will not have an available VPE treatment even if the null subject is viewed as VP-internal, given that the entire target VP on this view would not be null.

Thus, such examples show once again a configuration in which Japanese null elements have sloppy identity readings in a structure for which a VPE analysis is not structurally possible. If Japanese subjects are viewed as VP-*external*, then a VPE structure would be impossible for both (119) and (120), because the null subjects involved would be outside the VP, and thus not able to be part of an elided VP. Alternatively, if such subjects are viewed as remaining *internal* to the VP, then just (120) will show that the sloppy identity reading remains present even when additional VP-internal material remains overt.

Tomioka (1998) also shows that sloppy identity is possible for Japanese VP-internal null objects when the antecedent VP contains additional material which is entirely absent in the meaning of the target VP:

Japanese Null Object with Antecedent Material *Absent* from Target VP's Meaning: ✓Sloppy Identity *(*VPE Structure)*

(121) Nonbiriya-no Kanai-kyoozyu-wa [$_{\text{Antec}}$ zibun-no gakusei-ni]
easy.going-GEN Kanai-Prof-TOP self-GEN student-DAT

sukina kenyuu-o yar-asete-iru-keredo, Araki-kyoozyu-wa
favorite research-ACC do-CAUSE-be-but Araki-Prof-TOP

kibishiku sidousite-iru.
strictly instruct-be

Sloppy: ✓'Being easy going, Prof. Kanai lets his students do their favorite research, but Prof. Araki$_j$ keeps a tight grip on (lit. 'strictly instructs') (~~self$_j$'s students~~).'

(Tomioka 1998:ex.14)

The fact that sloppy identity is available in this example is especially telling, since its target

clause VP is drastically different from its antecedent VP in both meaning and syntactic composition. First, the target-clause main V *sidousite-iru* 'instruct-be' takes an accusative direct object, so that the null 'self's students' in the target clause would be accusative if overt, while its antecedent DP counterpart is marked with *dative* case. Additionally, this dative antecedent DP is *not* an internal object like the target-clause's null DP, but, rather is the causee of a causative construction. Finally, the meaning of the antecedent clause causative V's lower object, *sukina kenyuu-o* 'favorite research', is nowhere to be found in the target clause—making the lack of parallelism between the two VPs especially clear. The fact that a sloppy identity reading is nonetheless available for the target clause's null object in this situation thus seems especially suggestive that the typology of structure types in which Japanese null objects allow sloppy readings is quite unlike that involved in VP Ellipsis.

Finally, and on a par with the second situation described for example (120) above, additional arguments exist that sloppy identity readings are possible in Japanese and Korean structures in which only a proper subpart of the VP is missing, so that a VPE analysis is not possible.

✓**Sloppy Identity in a Null *Proper Subpart* of the VP** *(*VPE Structure)*

Japanese:

(122) a. Bill-wa kyositu-de [$_{VP}$ [$_{DP}$ zibun-no gakuseitati-ni]
Bill-TOP *classroom-in* *self-GEN* *students-DAT*

[$_{DP}$ otagai-o] shokais-ita].
each.other-ACC *introduce-PAST*

Lit. 'Bill in the classroom introduced (to) his students each other.'

b. ?John-wa ofisu-de [$_{VP}$ [$_{DP}$ *ec*] [$_{DP}$ otagai-o] shokais-ita].
John-TOP *office-in* *each.other-ACC* *introduce-PAST*

Sloppy: ✓'John$_j$ in the office introduced (~~to his$_j$ students~~) each other.'

(Oku 1998:ex.6)

Korean:

(123) a. Jerry-nun [$_{VP}$ [$_{DP}$ caki-uy ai-lul] [$_{DP}$ phal-ul] ttayli-ess-ta].
Jerry-TOP *self-GEN* *child-ACC* *arm-ACC* *hit-PAST-IND*
'Jerry$_i$ hit his$_i$ child on the arm.'

b. Kulena Sally-nun [$_{VP}$ [$_{DP}$ *ec*] [$_{DP}$ tali-lul] ttayli-ess-ta].
but *Sally-TOP* *leg-ACC* *hit-PAST-IND*
Strict: ✓'But Sally hit (~~Jerry$_i$'s child~~) on the leg.'
Sloppy: ✓'But Sally$_j$ hit (~~her$_j$ child~~) on the leg.' *(Kim 1999:ex.8)*

In the Japanese example in (122), taken from Oku's (1998) work, the V *shokaisita* 'introduced' is used, which, like its English counterpart, takes two internal arguments: one accusative, and one dative. In the target clause in (b), only the dative argument is null, with the accusative argument overt. Thus, the entire VP cannot be null here, as would need to be the case for a VP Ellipsis structure to be possible—and yet a sloppy identity reading is grammatical for the null dative argument.

The Korean example in (123), taken from Kim (1999), presents a similar problem for a VPE analysis. The target VP here involves an inalienable possession construction, an accusative 'whole' element (here, the accusative *ai* 'child'), and its possessed 'part' (here, the accusative *phal* 'arm' or *tali* 'leg'). Independently, the two accusative-marked DPs are known to both be VP-internal, but not to form a constituent (Yoon 1989, Maling and Kim 1992): the 'whole' DP has adjunct-like syntactic properties, while the 'part' accusative DP behaving as a syntactic internal argument, but which is unable to move out of the VP.

It is significant, then, that the 'whole' adjunct-like DP surfaces here as null, and with a licit sloppy reading. First, the fact that the two DPs both lie internal to the VP means that—like the Japanese target clause in (122b)—the entire VP cannot be null here, as would be necessary for a VPE

analysis of this example, and yet a sloppy reading is available. That the entire VP cannot be null is further supported by the fact that the overt 'part' DP here, *tali-lul* 'leg-ACC', is independently known to be syntactically inert for movement, so that it cannot have moved out of the VP (in which case a VPE analysis would be possible, since the null 'whole' DP would be the only VP-internal element).

6.6. Argument #3 against the VPE Proposal: Sloppy identity readings can be derived for null DPs

Subsections 6.4 and 6.5 have just presented a range of data which pose problems for a successful V-Stranding VPE proposal for Japanese and Korean. In 6.4, we saw that the one type of element in these languages which cannot elide on its own—namely, the VP-adverbial—also cannot elide when the rest of the VP is null. This suggests that null VP structures are generally not possible in Japanese and Korean. In 6.5, the content of each of subsections 6.5.1 through 6.5.4 showed, furthermore, that there is essentially no subpart of the sloppy identity generalization on which the VPE proposal for these languages is based which is empirically tenable.

Given this, it seems clear at this point that V-Stranding VPE is not an optimal account for the sloppy identity readings observed by Otani and Whitman (1991). However, we can recall from the beginning of this section that the assumption that sloppy identity readings *cannot* be derived for null DPs—but, rather, *only* for null *VPs*—constituted the remaining point of motivation used by Otani and Whitman (and by Huang before them) for a VPE treatment of the Japanese and Korean null argument structures at issue. This is thus the final point which remains to be addressed in ruling out the V-Stranding VPE proposal for these languages.

Work subsequent to the Otani and Whitman study has shown that, in fact, it *is* possible to derive for null *DPs* referent configurations which are consistent with those of sloppy identity

readings in VPE, so that the presence of sloppy identity readings alone in a given null string need not necessarily require a VPE treatment. This is done in slightly different ways by each of Hoji (1998), Oku (1998), Tomioka (1998), and Kim (1999).

Although I will refer the reader to the original works for the full detail of these treatments, each involves some type of semantically sensitive null argument treatments. Thus, Hoji (1998) proposes that Japanese null objects are interpreted on a par with Japanese *overt* bare nominals, which are syntactically (and thus semantically) unmarked for definiteness. Japanese *null* nominals will therefore be able to be indefinite as well, with the meaning of the null object's head N then supplied by the discourse context. This allows a pragmatic source which corresponds to the sloppy readings present in the appropriate Japanese null object examples, as consistent with Hoji's conception of the majority of Japanese sloppy readings as “sloppy-like readings” (see footnote 37 above).

Tomioka's (1998) proposal for Japanese is spiritually similar, but differs formally in proposing that the particular Japanese null objects which give rise to sloppy readings be treated as a type of semantic *pronoun of laziness* (e.g. Geach 1962, Cooper 1979), i.e. as pronouns whose meaning, under Geach's characterization, is equivalent to what would obtain if the antecedent were repeated in place of the pronoun. Tomioka (1998:524, fn. 4) also notes that an alternative approach would follow an indirect suggestion made by Heim (1990), employing either LF reconstruction or LF copying to interpret the pronouns involved. In this fashion, Oku (1998) proposes that the contents of the null argument be constructed via LF copying of the antecedent to the null DP.

The proposals by Hoji, Tomioka, and Oku all have in common the fact that the sloppy reading for the null arguments of these languages arises formally in a way which is linked to pragmatics. Thus, on their views, one possible referential configuration for the null argument's meaning is

consistent with the sloppy reading, and it is in this way—and not via the presence of explicitly marked referential indices which *mandate* such a referential configuration—that the sloppy reading is obtained. Contrasting with this is Kim's (1999) proposal, based on Korean null argument data, but proposed for sloppy readings in Japanese and Chinese as well. Kim (1999) adopts Fiengo and May's (1994) indexical theory, noting that the role of the VP in their conception of reconstruction (which, in their system, derives the sloppy readings of English VPE using the *vehicle change* operation) is simply to define the domain to which reconstruction applies. Kim shows that it is equally possible for reconstruction to apply to just an NP (i.e. a DP, under the DP hypothesis of nominal phrases, which Kim does not appear to adopt), and thus proposes that the sloppy readings of Korean, Japanese, and Chinese be derived in this way. On Kim's view, then, the sloppy reading arises when there is explicit indexical structure which reflects the sloppy reading because vehical change has occurred.

Despite the differences present within these proposals, what is important to take away from their existence for present purposes is that it is possible to derive sloppy readings for null elements which are just DPs, and not a full VP. Thus, the work of these four authors as a whole demonstrates that, upon further investigation, it is not possible to maintain Otani and Whitman's (1991) assumption that sloppy readings are only derivable under a VPE analysis. Given this, the remaining motivation for the V-Stranding VPE proposal for Japanese and Korean is removed, with it workable and effective to treat the surface null objects of these languages *just* as null objects in terms of their syntax—even when they give rise to sloppy or sloppy-like identity readings.

6.7. Summing up

Given the range of data just presented, it seems clear that it is not possible to tenably argue the existence of V-Stranding VP Ellipsis in Japanese and Korean—in contrast to the arguments given in this thesis for languages like Hebrew, Irish, Swahili, and Ndendeule. First, as laid out in subsection 6.2, we have seen that Japanese and Korean allow their VP-internal arguments to licitly appear as null, even when other VP-internal material is overt. For this reason, the sorts of null argument controls developed for the core languages discussed in the preceding sections of this chapter cannot be developed for Japanese and Korean.

Furthermore, as seen in subsection 6.4, the one VP-internal element which *cannot* drop independently, namely VP-adverbial elements, *remain* unable to drop even when the rest of the VP is null. Thus, not only is it not possible to independently rule out a null argument analysis for putative VPE strings in which null arguments are involved in these languages, but the inability of VP-adjuncts to appear as null in such putative VPE strings presents a general argument that these languages lack VP Ellipsis as an available stragegy.

As was discussed in subsection 6.3, then, the motivation for Huang's (1987b, 1988, 1991) initial suggestion that V-Stranding VPE exists in these languages, as well as for Otani and Whitman's (1991) development of Huang's suggestion, does not involve strings which are argued to be best analyzed as VPE based on the particular elements which have dropped, as is the case for the core languages discussed in this thesis. Rather, the VPE proposal for Japanese and Korean involves examples which could otherwise be analyzed just as cases of null objects, but in which sloppy identity is available whenever it also is in English VPE, and in which sloppy identity is *not* available when it is blocked for English VPE (i.e. in the “non-local” cases of sloppy identity in embedded

clauses), or when a V-Stranding VPE structure is not possible because the antecedent and target VPs are not sufficiently isomorphic.

Given that the pattern of available null arguments in these languages provides no evidence as to how the null argument versus VPE ambiguity problem should be resolved, and that the inability of VP-adverbials to drop when the rest of the VP is null actually provides an argument—though not an insurmountable one—against a VPE proposal, a very heavy burden is placed on the accuracy of the sloppy identity generalization in order for the VPE proposal to remain plausible. Hence, while it is not ideal to motivate V-Stranding VPE in a given language using data *only* from sloppy identity patterns, such a proposal might still be viewed as tenable in a scenario in which sloppy identity was seen overwhelmingly to obtain when and only when a VPE structure is possible, and in ways which pattern—again overwhelmingly—with the availability of sloppy identity readings in English VPE.

However, as the data given in the four subsections of 6.5 show, there is actually *no* subpart of the sloppy identity generalization for which clear counterexamples do not exist. Thus, we saw in this section examples from one or both of Japanese and Korean in which sloppy identity was *not* available when it *is* available for the analogous English VPE example, or in which a V-Stranding VPE structure *is* possible. We also saw the reverse: examples in which Japanese and Korean were shown to *allow* sloppy identity readings even though their English VPE counterparts do not allow it, or in which a V-Stranding VPE structure is not possible. Overwhelmingly, then, the pattern of sloppy identity readings which are found in Japanese and Korean turns out to be quite *unlike* that found in English VPE, and, further, not to correlate in any observable way with the possibility of a V-Stranding VPE analysis.

For Japanese and Korean, then, we are left with a situation in which there are no defendable

empirical generalizations which motivate the existence of V-Stranding VP Ellipsis. The null argument facts are neutral with respect to the proposal, the inability of VP-adjuncts to drop argues against the proposal, and the sloppy identity readings which initially appeared to be the proposal's foundation turn out to show a markedly different pattern from what would be expected for the counterparts of English VPE, or for a phenomenon which correlates with the possibility of a V-Stranding VPE structure.

Finally, as discussed in subsection 6.6, recent work shows that null VPs are not the only elements for which sloppy readings can be formally derived. Instead, as laid out in this subsection, various workable proposals have been given by Hoji (1998), Oku (1998), Tomioka (1998), and Kim (1999) via which sloppy identity (or "sloppy-like") readings can be made to formally obtain for null DP structures. Further, work by these authors can be noted to demonstrate that their null DP proposals actually capture the pattern of sloppy readings, and the particular nature of such readings, which is found in Japanese and Korean in a more accurate way than is possible under a V-Stranding VPE analysis.

Given all of this, it must be concluded, I think, that Japanese and Korean do not, in fact, have a V-Stranding VPE strategy. Unlike the core languages of Hebrew, Irish, Swahili, and Ndendeule discussed above, then, the relevant data in Japanese and Korean appear to be best treated as cases of *null arguments*, and *not* as instances of V-Stranding VPE.

7. Chapter Summary and Conclusions

We began this chapter by outlining some of the core traits of English VPE which a given case of VPE outside English should be expected to share. This was accompanied with references to existing literature on Hebrew, Irish, and Swahili which has demonstrated that such traits exist in putative V-Stranding VPE from these languages.

We then discussed the general problem of surface-string ambiguity between a V-Stranding VPE and a null argument analysis, which has been a problem in a portion of the literature on both constructions. Given that a language, first of all, displays diagnostics for raising of its main V into (at least) the Infl domain in overt syntax, so that V-Stranding VPE is a possible construction for the language, a general strategy was laid out for teasing the two constructions apart in a given language.

It was proposed that the general null argument possibilities for all VP-internal elements in the language should first be investigated, with an aim toward identifying which VP-internal arguments, if any, may independently drop, as well as whether there are restrictions on the occurrence of such null arguments—such as requiring the co-occurrence of agreement morphology, or allowing only certain types of DPs to drop.

This strategy was then applied to data from four languages—from Hebrew, from Swahili and Ndendeule, and from Irish. V Raising diagnostics were first presented for each language. Those for Hebrew and Swahili were of the type commonly employed in the literature, showing that VP-edge elements such as manner adverbials and floated quantifiers obligatorily appear to the *right* of the main V. For Irish, such data was seen not to be directly relevant, since the language requires strict adjacency between its main V and subject. Instead, a series of arguments was presented that the post-verbal material of Irish finite clauses—including the subject, the direct object, and any

additional VP-internal content—forms a syntactic constituent. This, combined with the language's strict VSO word order in its finite clauses, provided the motivation for an analysis involving raising of the main V into at least the inflectional domain.

With V Raising established for each language, the null argument possibilities for each were then explored. For Hebrew, it was seen (summarizing the results of Goldberg 2002a,b) that the only VP-internal element which may elide independently is the direct object, and further that this argument may drop *only* when it is inanimate. Swahili and Ndendeule (summarizing the work of Ngonyani 1986a, 1998) were seen to also allow only direct objects, among their VP-internal elements, to elide, and that these languages require that such Null Objects occur obligatorily in the presence of object-agreement morphology on the selecting V.

Finally, Irish was seen (summarizing the results of McCloskey and Hale 1984 and McCloskey 1986) *not* to allow null direct objects to finite Vs. However, it *was* seen to allow its subjects, complements of Ps, possessor DPs, and genitive direct objects to Verbal Ns to independently appear as null. The Irish requirement on such null arguments was shown to be similar to that described for Swahili and Ndendeule, in the sense that the null arguments independently possible in all three languages are licit *only* when agreement morphology appears on a relevant head.

In the final section, we explored the controversy over whether V-Stranding VPE exists in Japanese and Korean, as proposed by Otani and Whitman (1991). The relevant data from Japanese and Korean were seen to contrast in marked ways with those of the core languages discussed in the previous sections. This formed the basis for a final case study in which the persistently under-recognized ambiguity problem between null arguments and V-Stranding VPE resulted in the determination that it was in fact the former, and not the latter, which was present.

Given the results just summarized from this chapter in Section 6.7, Japanese and Korean will henceforth be excluded from core discussion in this thesis, since they do not appear to have data which are plausibly treated as involving VP Ellipsis. For the remaining languages of Hebrew, Irish, and Swahili, however, we have seen a convincing array of arguments that putative V-Stranding VPE data cannot instantiate cases of independently elided null arguments. Already extant literature (along with the new Hebrew facts I presented in Section 1) demonstrates, additionally, that data from these languages share an array of behavioral traits with English VPE, but not with other types of null anaphora like Gapping, Stripping, or Null Complement Anaphora.

For such data from Irish, Hebrew, and Swahili, then, (A) behavior on a par with what is known of English VPE has been established, and (B) the conceivable diagnoses alternative to one of V-Stranding VPE have been shown to give inadequate treatments of the attested facts. I therefore assume, henceforth, that these data are best treated as cases of VP Ellipsis. This then brings us to the second of the core goals of this thesis: to consider how these data can be derived, and to use this consideration as a way to compare the relative success of the PF Deletion versus LF Copying syntactic analyses. Carrying out this task is the focus of the next two chapters.