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The Meanings of Personal Pronouns: *De Se* Interpretation of Long-distance Anaphora in Icelandic and Other Languages

by
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Abstract

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This study investigates the distribution and interpretation of long-distance anaphors. The central thesis of the analysis is that MMA lexically bear a pronominal features akin to the first person pronoun feature. This feature gives rise to an interpretation which can be characterized as 'relativized first person' as in the interpretation of *Malcolm thinks Makiko likes him* as **Malcolm thinks: Makiko likes me**. This interpretation is known in the literature as *de se*.

Chapter One presents the distribution of the Icelandic MMA, and the basic semantic characteristics and distribution of *de se* pronouns.

Chapter Two shows that MMA belong to the same class as first and second person pronouns. The proposed Binding Theory categorizes the closed class of referring expressions (those characterized by the closed class of ϕ-features) by morphological shape: mono-morphemic or bi-morphemic. Thus MMA, as well as PRO, and *pro* are subject to the same binding constraints as traditional pronouns.

A theory of context determination is advanced; it provides lexical axioms for first and second person pronouns, and for MMA. The context theory also provides a semantics for the bits of language that prompt point-of-view shifts. Logophoric, *de dicto* and *de se* interpretations are shown to follow from the same semantic mechanism. The

lexical axiom for MMA is substantiated by two kinds of evidence: semantically, its *de se* interpretation; morphologically, first person verbal agreement patterns seen with nominative MMA in Kannada. An expression which is not a member of the lexicon, one which can occur syntactically with no phonological matrix, is predicted to be a vehicle of either first or second person feature assignment. Semantic confirmation is shown by the *de se* interpretation of subject-controlled PRO and the concealed imperative interpretation of some object-controlled PRO. Morphological confirmation: the first and second person verbal agreement patterns seen in certain Kannada *pro* constructions.

Chapter Three is a review of the literature on MMA. It discusses the intersection of various versions of Binding Theory with the structural accounts. It presents two semantic accounts which relate properties inherent in MMA to the semantic properties of the domains in which they are found.

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Chapter One

The concern of this work is to describe the referential systems in languages which exhibit nominal forms in argument positions that have been dubbed, for better or worse, long-distance-anaphors (LDAs)[1]. The goal of this research is to fit an account of the behavior of these forms into a larger theory of reference. The reference theory developed here addresses a generalized Binding Theory, those theories which assume a syntactic component with indexed linguistic expressions.. With minimal adjustments to the statement of the syntactic principles for determining indexical patterns, I hope to uncover one part of the grammar of co-reference. The contribution my research makes is its examination of the behavior of MMAs and pronouns which can occur in precisely the same structures, with precisely the same antecedents. The resulting perspective on the system governing the relationship between these referential elements forms the basis for the semantic theory proposed here.

Section 1 The Distribution of Pronouns and MMAs in Icelandic: A Descriptive Guide

Of the grammars that generate long-distance dependencies between argument positions, Icelandic provides a most challenging field for study because in that grammar, there appear to be more environments in which there is complementary distribution between pronouns and MMA than in other grammars which exhibit MMA. This array of data evinced by the Icelandic pronominal system presents the opportunity to see whether there is a version of Binding Theory that can explain this larger domain of

complementarity. The large overlap in the domains of MMA and pronouns can be more fruitfully scrutinized by examining the pattern of divergences as well. In other ways, too, the Icelandic grammar differs from many grammars in that there is a greater variety of arguments which can be classified as "anaphoric". While English has only two types of arguments whose reference is contextually dependent, namely pronouns and reflexives, Icelandic has four, two of which are mono-morphemic, and two which are bi-morphemic. In this section, for the purposes of basic presentation, only the third-person paradigm is discussed; later a comparison to the first and second person paradigm will be made. (1) provides an example of these forms in accusative case:

(1)

hann sjálfan "himself" ACC,masc,3 rd p,sing ACC, masc,3 rd p, sing	sjálfan sig "self-self" ACC,masc,3 rd p,sing ACC,3 rd p
hann "him" ACC,masc,3 rd p,sing	sig_{rd} "self" ACC,3 rd p

Section 1.1 Clause-mate effects: Bi-morphemes vs. Mono-morphemes

What are the environments in which these elements can occur?[2] The first cut can be made between the bi-morphemes and the mono-morphemes. With the exception described in the next sub-section of MMA in a special class of verbs, the bi-morphemic forms are grammatical when bound locally, while the mono-morphemic forms are not.

(2) Ég sýndi $Jón_1$ sjálfan sig_1 /hann $sjalfan_1$ í speglinum

I showed Jón self-self /himself in the mirror

(2a) * Ég sýndi $Jón_1$ $hann_1$ /sig_1 í speglinum

I showed Jón him /self in the mirror

With an out-of-clause antecedent, the opposite is true: the bi-morphemes are ungrammatical and the mono-morphemes are grammatical.

(3) * $Jón_1$ telur að ég hefði svikið sjálfan sig_1/hann $sjalfan_1$

Jón believes that I have^{SBJ} betrayed self-self /himself

(3a) $Jón_1$ telur að ég hefði svikið $hann_1$/sig_1

Jón believes that I have^{SBJ} betrayed him/ self

It seems that the bi-morphemes must be locally bound, and the mono-morphemes only at a distance.[3] This generalization largely holds true, with some exceptions concerning MMA. For the majority of predicates, neither mono-morpheme can be locally bound.

(4) * $Jón_1$ elskar sig_1/ $hann_1$

Jón loves self/ him

Section 1.2 Local Binding of Mono-Morphemic Anaphora

In addition to structures where it is embedded within a DP, the MMA can occur with a local antecedent in a handful of so-called "inherently reflexive" verbs such as

raeskja sig 'clear self', *i.e.*, 'to clear one's throat', and haga $sér_{DAT}$ 'to behave one's self'. These verbs cannot occur with any other form, that is, they do not take any of the other referential elements listed in (1) or names. There is another larger class of verbs in which the MMA can be locally bound, which **do** take other types of arguments, examples are raka 'to shave', meiða 'to (physically) hurt', þvo 'to wash', and greiða 'to comb'.

(5) $Jón_1$ rakar Pétur/ sig_1/*$hann_1$

Jón shaves Peter/ self / him

With this second kind of verb, it is possible to use the bi-morphemic reflexive sjálfan sig, in a syntactic environment like (5), but only with contrastive intonation.[4] These two classes of verbs are distinct in another way as well. While the second class may have an antecedent outside of the clause, the first may not, as the following pair illustrates:

(6) $Jón_1$ segir að Harold raký sig_1

Jón says that Harold shaves self

(7) * $Jón_1$ segir að María hagi ser_1

Jón says that Maria behaves self e.g. "Jón says that Mary keeps him in line"

A description, if not an actual explanation for the distinction between the raka class and other verbs, those which allow neither sig and hann to be locally bound (as

seen in (4)) has been offered[5] to the effect that the former class have a sort of "double entry" in the lexicon, one allowing for the reflexive reading, the other for the obviative one. The description of what allows for the "reflexive entry" is that there is a predicate entry for these verbs which takes objects that are in some sense inalienable, that is, objects which are part of the body of the agent.

Putting aside the raka class, it might be possible to make the claim that the mono-morphemes are subject to something like Principle B, and the bi-morphemes to Principle A.[6] However, other cases warrant reconsidering either the claim or the putting-aside move. If we look at ECM verbs, such as telja `think', segja `say', vona `hope', and others of this type, we can see exactly how crucial the "inalienable" description becomes, no matter which Binding Theory classification of MMAs one chooses. In such contexts, just as with raka, both sig and contrastively stressed sjálfan sig can occur, as (8) shows:

(8) Jón$_1$ telur sig$_1$ / ⇑ sjálfan sig$_1$ /*hann$_1$ vera skrýtinn

Jón believes self/ self-self / him to-be crazy

If some extension of the inalienable description can be formulated such that the agent of belief, hope, etc. can be said to be inalienable from these attitudes, the division of Principle A effects from Principle B effects with respect to mono-morphemic arguments might be maintained, given a formal theory for this extension. In other words, this extension of Binding Theory would have to provide some property of predicates in this category of inalienability that explains why embedding "sig" into this predicate causes it

to adhere not to the co-indexation rules for mono-morphemes, but to those of bi-morphemes

Section 1.3 Anti-Subject Orientation

In certain contexts,[7] we can observe a difference in the distributional pattern between MMA and the other mono-morpheme, the more prosaic pronoun. The pronoun conforms to what has been dubbed "anti-subject-orientation". The following pair illustrates the most local case of pronominal anti-subject orientation.[8]

(9) Ég sýndi Jón$_1$ móður sína$_1$ / hans$_1$

I showed Jon mother$_{ACC,fem,sing}$ self's$_{ACC,fem,sing}$ / his$_{GEN,masc,3^{rd}p.sing}$

'I showed John his mother'

(10) Jón$_1$ sýndi mér móður sína$_1$ /*hans$_1$

Jon showed me mother$_{ACC,fem,sing}$ self's$_{ACC,fem,sing}$ / his$_{GEN,masc,3^{rd}p.sing}$

Further complicating the description of binding domains in Icelandic is the pronominal distribution of first and second person. Unlike hann, neither are anti-subject oriented. Compare (10) with (11) and (12).[9]

(11) Ég sýndi Jón móður mína

I showed Jon mother$_{ACC,fem,sing}$ my$_{ACC,fem,sing}$

(12) Þú sýndir Jón móður þína
you showed Jon mother$_{ACC,fem,sing}$ your$_{ACC,fem,sing}$

Like sig, the first and second person pronouns can be bound in ECM constructions. Thus both (13) and (14) are grammatical. In this respect too, they contrast with hann.

(13) Ég tel mig vera skrýtinn
I believe me to be strange

(14) Þú telur þig vera skrýtinn.
You believe you to be strange

(13) is grammatical with a contrastively stressed sjálfan mig, and (14) is good with a contrastively stressed sjálfan þig. Also like sig, mig and þig can be locally bound in the "inherently reflexive" predicates discussed in the previous section. But they fall together with hann in that they cannot bound in the open class of predicates. So an example like (4) is ungrammatical for both of the third person forms, and equally so for the first and second person forms.[10]

(15) * Ég$_2$ elska mig$_2$
I love me

(16) * Þú$_2$ elskar þig$_2$
you love you

In Chapter Two, arguments for a specific formalization of the locality conditions on pronouns will be laid out, but at this point in the descriptive guide, one can already raise a question: how do these conditions interact with anti-subject orientation? We may conclude from (2a) that the locality condition for hann is as small as the minimal IP, but the ungrammaticality of the indexing on hann in (8) is over-determined in that it violates both the anti-subject-orientation condition and the locality condition.

(2a) * Ég sýndi Jón$_1$ hann$_1$ /sig$_1$ í speglinum
I showed Jon him /self in the mirror

(8) Jón$_1$ telur sig$_1$ / ⇑ sjálfan sig$_1$ /*hann$_1$ vera skrýtinn
Jón believes self / self-self / him to-be crazy

Section 1.4 Interpretation Constraints

In other types of infinitives, there is also a subject effect. Outside of the infinitive clause in which it is embedded, the MMA is always subject-oriented, while third person pronouns appear to be anti-subject-oriented. The apparent anti-subject-orientation of the pronoun in these extra-clausal contexts, however, is illusory. The restriction in force here involves a certain interpretation on pronouns.

These interpretations are discussed in full detail in Section 2 of this chapter, but for the purposes of this descriptive guide, it is convenient to establish names for the

interpretations under discussion. There are three interpretative possibilities relevant to the topic. What follows is a very general as well as cursory description of these possibilities:

I. ***De Se*** is used in describing an interpretation of an expression in a sentence when:

There is a relation between an agent argument and that expression such that the agent would be disposed to use a first person pronoun when describing the portion of the sentence that characterizes that which he is the agent of.

Example: George believes he is college material

where George would be disposed to say "I am college material."

II. ***Non De Se*** is used in describing an interpretation of an expression in a sentence when:

There is a relation between an agent argument and that expression such that the agent would **not** be disposed to use a first person pronoun when describing the portion of the sentence that characterizes that which he is the agent of.

Example: George believes he is college material

where George would be disposed to say of himself "He is college material."

III. Neither term is used in describing an interpretation of an expression in a sentence when:

The interpretation is neutral as to whether or not there is a relation between an agent argument and that expression such that the agent would be disposed to use a first person pronoun when describing the portion of the sentence that characterizes that which he is the agent of.

Example: George requested a dog that resembles him

where the form George's request takes is immaterial to the interpretation.

Returning now to the distributional description of pronouns and MMA with respect to these interpretations, note that while the MMA is interpreted *de se*, the pronoun when bound in infinitives cannot be so interpreted.[11] The prohibited interpretation is marked ☮. (Thráinsson, (1991).

(17) $Ég_2$ lofaði $Jón_1$ að PRO_2 kyssa $hann_1$/*sig_1
I promised Jón to kiss him / self

(18) $Þeir_1$ skipuðu $Önnu_2$ að PRO_2 kyssa ☮$þa_1$ /$sig_{1/*2}$
they ordered Anne to kiss them / self(s)

(19) $Pétur_1$ sagði $Jens_2$ að PRO_2 berja konuna ☮$hans_{1,}$/$sína_{1,2}$
Peter told Jens to hit wife his /self's

The distribution remains the same, no matter how many infinitives are stacked.

(20) $Dringinir_1$ skipuðu $forsetann_2$ að PRO_2 segja $Jens_3$
the boys ordered the president to tell Jens
að PRO_3 berja ☮$þá_1$ /☮$hann_2$ /$sig_{1,2}$
to hit them / him /self

(21) Dringinir$_1$ skipuðu forsetann$_2$ að PRO$_2$ segja Jens$_3$

the boys ordered the president to tell Jens

að PRO$_3$ lesa bókina ☮þeirra$_1$ /☮hans$_2$ /sína$_{1,2}$

to read book their his self's

The question of anti-subject orientation versus locality conditions can now be opened up a bit further. Let us review the ECM case. The following contrast is revealing:

(22) * Jón$_1$ telur hann$_1$ vera skrýtinn

Jón believes him to-be crazy

(23) ☮ Jón$_1$ telur móður hans$_1$ vera lasinn

Jón believes mother his to be sick

(22) is not grammatical on any interpretation, while (23) allows the given indexing on a *non de se* interpretation. On the assumption that for both hann in (22) and móður hans in (23), the matrix subject is within the binding domain, this contrast shows that anti-subject-orientation is independent of Binding Theory.

Section 1.5 Mood Conditions

Looking now at long-distance binding in tensed clauses, there is a subjunctive/indicative split which effects the distribution of the two mono-morphemes. In subjunctive complement clauses, the pronoun can take any non-local antecedent, while the MMA is ungrammatical unless it is co-indexed with a (non-local) subject. (24) Thráinsson, (1991) [12]

(24) Ég sagði $Jón_1$ að þú hefðir svikið $hann_1$ /*sig_1

I told Jon that you had^{SBJ} betrayed him /self

(25) Ég sagði $Jón_1$ að þú hefðir svikið móður $hans_1$ /*$sína_1$

I told Jon that you had^{SBJ} betrayed mother his /self's

In subjunctive complements, where the antecedent is a (non-local) subject, there is no complementarity between the two mono-morphemes: (26) Thráinsson, (1976)

(26) $Jón_1$ segir að $Petur_2$ telji að $Haraldur_3$ vilji

Jon says that Peter believes^{SBJ} that Harold wants^{SBJ}

að $Billi_4$ heimsæki $hann_{1,2,3,*4}$ /$sig_{1,2,3,*4}$

that Bil visit^{SBJ} him / self

(27) $Jón_1$ segir að $Petur_2$ telji að $Haraldur_3$ vilji

Jon says that Peter believes^{SBJ} that Harold wants^{SBJ}

að $Billi_4$ heimsæki móður $hans_{1,2,3,*4}$ /$sína_{1,2,3,4}$

that Bill visit^{SBJ} mother his / self's

With verbs that take an indicative complement clause, however, there is something quite different going on: the MMA is ungrammatical on any indexing at all. Locally, as above, only the possessive MMA is permissible. ((28-31) Thráinsson (1991)

(28) $Jón_1$ veit að þú hefur svikið $hann_1$/*sig_1

Jón knows that you have^{IND} betrayed him/ self

With verbs that may take either an indicative or a subjunctive, the MMA is grammatical only if the subjunctive option is taken. The pronoun is grammatical in either.

(29) $Jón_1$ heyrði að ég hefði /*hafði svikið sig_1

Jón heard that I had^{SBJ} /*had^{IND} betrayed self

(30) $Jón_1$ heyrði að ég hefði /hafði svikið $hann_1$

Jón heard that I had^{SBJ} /had^{IND} betrayed him

A verb such as vita, (to know) though as a matrix verb it obligatorily takes an indicative clause, when embedded under a verb which takes a subjunctive clause, is inflected with

the subjunctive mood. In this case, the complement clause has the option to take subjunctive inflection, by the so-called "domino effect" (Thráinsson 1976), or to take an indicative clause. Where there are no indicative interruptions, the MMA is grammatical as long as the antecedent is a subject.

(31) $Anna_1$ segir að $Jón_2$ viti að $Maria_3$ elski /* elskar $sig_{1,2}$

Anna says that Jon $knows^{SBJ}$ that Maria $loves^{SBJ}$ / $loves^{IND}$ self

Relative clauses also show the "domino effect". That is, the verb in a relative clause embedded in a subjunctive complement will also be in the subjunctive, thus providing an environment in which the MMA is allowed. Where the relative is not embedded in a subjunctive, no "domino effect" occurs, and the domain remains opaque. (32-33, Maling (1984))

(32) * $Ólafur_1$ hefur ekki enn fundið vinnu sem ser_1 líkar

Olaf has^{IND} not yet found a job which self $likes^{IND}$

(33) $Jón_2$ segir að $Ólafur_1$ hafi ekki enn fundið vinnu sem $ser_{2,1}$ líki

Jón says that Olaf has^{SBJ} not yet found a job which self $likes^{SBJ}$

Section 1.6 Complement Condition

As the following example shows, subjunctive inflection is not sufficient for the MMA to survive. (Thráinsson, (1991)

(34)* Peter$_1$ yrði glaður ef Þu hjalpaðir ser$_1$

Peter would-be glad if you help^{SBJ} self^{DAT}

The condition seems to be that the MMA must be within the complement of the verb of which its antecedent is the subject.

(35) Jón$_1$ segir að Petur$_2$ yrði glaður ef Þu hjalpaðir ser$_{1/*2}$

Jón says that Peter would-be glad if you helped^{SBJ} self^{DAT}

Whatever this condition amounts to, it is a condition which must be added to that which enforces the non-locality of the antecedent. That is, the indexing in (33) allowing the subordinate subject as an antecedent must be distinguished from the ungrammaticality of a local subject, as in (4); and again with the ungrammatical subordinate subject antecedent in (35).

So far, the data include only cases where the antecedent binds the arguments in question. There are two kinds of cases where this relation fails to hold between the antecedent and the MMA. In the first type, the MMA must still occur in a subjunctive

clause and the antecedent must still be the subject of the subjunctive-assigning head, but as (36) shows, the antecedent needn't C-command the MMA .

(36) Skoðun Jóns$_1$ er að þú hafir svikið sig$_1$/hann$_1$
Opinion Jón's is that you have^{SBJ} betrayed self/ him

This case could be viewed as constituting evidence that C-command isn't required. That is, since (37) is a grammatical DP, the MMA doesn't lose the licensing it has in (37) when the copula selects its two constituents in (36).

(37) Skoðun Jóns$_1$ að þú hafir svikið sig$_1$
Opinion Jón's that you have^{SBJ} betrayed self

This would be to say that what matters in determining the conditions on the antecedent of an MMA is the relation between the subjunctive-assigning head and its subject, rather than C-command.

Section 1.7 Logophoric Condition

There are other instances of MMA, usually called "logophors" which have been used (Kuno, 1987; Zribi-Hertz, 1989; Thráinsson, 1991; Sigurðsson 1990; Maling, 1984; Anderson, 1986) to argue that the distribution of MMA is not to be explained as a matter of binding requirements. In contexts which may be described as narratives, the MMA

must be co-referential with the character whose point of view is being narrated. The term "logophor" was first introduced by Clements (1975) as characterizing "the thought, speech and perception of individuals other than the speaker-narrator". Examples such as the following illustrate the phenomena. (Thráinsson, 1991)

(38) Hann$_1$ lá einn i myrkrinu og hugsaði. María$_2$ var alltaf svo andstyggileg.

He lay alone in the dark, thinking. Mary was always so nasty.

Þegar Ólafur$_3$ kæmi segði húnn$_2$ sér$_{1/*2/*3}$ áreiðanlega að fara

When Olaf came tell she self^{DAT} certainly to leave

This condition appears to more specific than the condition for pronouns with extra-sentential antecedents, which requires merely that the antecedent be a member of the discourse domain. Most theorists categorize data like (38) as instances of a class distinct from that seen in sentences which contain both antecedent and MMA. For these theorists, there are both MMA which are explainable by syntactic binding conditions, and then there are logophors, a special type of discourse pronoun.[13] Thráinsson's point with this example was that logophors can't just occur out of the blue; starting the narrative with "Maria var allto svo andstyggilieg ..." without actually establishing a particular viewpoint would render the use of sér ungrammatical. The method of establishing a viewpoint appears to require more than mere previous mention, that is, some literary convention that signals the onset of this type of narrative.

Section 1.8 Intensionality Condition

There is some residue left from this account that cannot be explained without recourse to notions of intensionality. (39) and (40) are grammatical with the subordinate subject as an antecedent, and the same structures are grammatical on that indexing, where in place of langað i 'wanted', pyffti 'needed" or vonast 'hoped for' is substituted.

(39) $Jón_1$ sagði að $Maria_2$ hafði langað i hund sem að líkist $ser_{1,2}$
Jón said that Maria had^{SBJ} longed for a.dog which resembles self

(40) $Jón_2$ segir að $Ólafur_1$ hafi ekki enn fundið vinnu sem $ser_{2,1}$ líki
Jón says that Olaf has^{SBJ} not yet found a job which self likes^{SBJ}

Yet, (41) which is structurally identical, is not grammatical with the subordinate subject as antecedent. The difference in the verb types is intensional versus non-intensional.

(41) $Jón_2$ segir að $Ólafur_1$ hafi barið hund / hundinn sem biti $sig_{2,*1}$
Jón says that Olaf has^{SBJ} hit (a) dog/ dog-the which bit^{SBJ} self

Similarly, it is unaccounted for that passive subjects generally make bad antecedents as the contrast between (42) and (43) shows: (Sigurðsson ,1990)

(42) * Ólafur $_1$ var beðinn um að Þú hengir að koma til sín$_1$

Olaf was asked for that you get^{SBJ} to come to self

'Olaf was asked that you be allowed to visit him'

(43) Olaf$_1$ bað um að Þú fengir að koma til sín$_1$

Olaf asked for that you get^{SBJ} to come to self

'Olaf asked that you be allowed to visit him

Yet (44) is grammatical even though it has a passive antecedent for the MMA.

(44) Honum$_1$ var sannfærður um að þú hefðir svikið sig$_1$

He was convinced about that you had^{SBJ} betrayed self

The difference between (42) and (44) is again one of intensionality. And finally, the ungrammaticality of an inanimate antecedent which is demonstrated by the following pair, is not accounted for without recourse to a notion of intensionality.

(45) Jón$_1$ krafðist Þess að við hugsuðum stöðum um hann$_1$/sig$_1$

Jon demanded it that we thought^{SBJ} constantly about him/ self

(46) þetta vandamál$_1$ krafðist Þess að við hugsuðum stöðum um Það$_1$/*sig$_1$

this problem required it that we thought^{SBJ} constantly about it/self

This completes the basic inventory of the domains for pronouns and MMA in Icelandic. The constraints on the various expressions types described above appear to be of disparate types, some syntactic, some semantic. The semantic data clusters around notions of intensionality - the logophoricity description, the ***de se*** description, the animacy requirement, as well as the intensionality requirement itself, the last requirement discussed above. In the next chapter, these conditions are argued to follow from the way the syntactic and semantic components interact. From the point of view of intensionality, this interaction makes a split that puts third person pronouns on one side, and the MMA, first and second person pronouns on the other. Before laying out this account, it is worth examining and describing a range of contexts involving anaphora within intensional contexts.

Section 2 Anaphora and Intensionality

The following pair of sentences presents a puzzle which invites an intersection of theories of anaphora and of belief ascription.[14]

(1) Only Churchill remembers giving the Blood Sweat and Tears speech

(2) Only Churchill remembers his giving the Blood Sweat and Tears speech.

The first is true and the second is false. This difference in truth value is due to a contrast in interpretation known in the literature as *de se*. In (1) Churchill is asserted to possess a *de se* remembrance of the giving of the Blood Sweat and Tears speech, an attitude which

gives him sole proprietorship of that remembrance. In (2) Churchill is asserted to bear sole ownership of a memory that others also have, namely Churchill's giving the Blood Sweat and Tears speech. Since there are other people who remember that event, (2) is therefore false. (2) is consistent with circumstances in which a *de se* interpretation would hold, but that understanding of the sentence is certainly not necessary, since it is conceivable that Churchill could fail to remember giving the speech, by reason of amnesia with respect to his identity, yet remember that the speech was given (by the person who fails to realize is himself). Such a scenario, which would exclude a *de se* understanding of the sentence, is a standard way for testing whether a sentence is necessarily *de se*. The interpretation of (2) is most consonant with being not *de se*. That interpretation is a *non de se* interpretation. The contrast between the two interpretations is undoubtedly more subtle than this test, the difference being something like public versus private relations to belief states, but however the distinction is demonstrated, the above pair exhibits a robust *de se/non de se* contrast.

There are two basic claims I wish to present here. First, that there is a linguistic representation responsible for *de se* interpretations.[15] The arguments for this claim are directed toward various kinds of theories which take the *de se* interpretation to be undifferentiated from other types of pronominal interpretation. One may take such a view two ways: either the conditions for getting a *de se* interpretation are purely non-linguistic, that is to say, *de se*ness is a psychological phenomena whose existence owes nothing to the knowledge which grammar encodes, or as a reductionist theory (See Boër and Lycan, 1980) which seeks to accommodate the interpretation of *de se* pronouns by

reducing them to other attitudinal interpretations. Another reductionist strategy (see Lewis (1979)) subsumes all belief ascription under self-ascription.

The second claim I wish to present is that the distribution of long-distance anaphora (MMA) in Icelandic and other languages can be predicted from the hypothesis that they are *de se* pronouns, given an articulated theory of the linguistic conditions for *de se* interpretation. The alternation of control PRO with the overt pronoun demonstrated in the pair above fall within this theory. The MMA data as fitted within the theory of *de se* representation can be used to argue fairly directly against the first view, since it appears to be the case that there are pronominal forms including PRO and Icelandic MMA which are dedicated to the *de se* interpretation. To further strengthen this line of argument, I review other theories of MMA in order to demonstrate that its distribution is not satisfactorily explained by any theory independent of a *de se* account.

Section 2.1 Preliminary ***De Se*** Theory

Before turning to any such account, it will be necessary to lay out what I take the empirical and theoretical terrain to be. In order to pull apart the description of *de se*ness from a theory of the role this propositional characteristic plays within the grammar, it will be useful to draw up some sort of criteria about what does and does not constitute a *de se* attitude as distinct from how one might be represented. I take it to be a propositional attitude which is attributed to a linguistic performer, something which a linguistic performer can have with respect to the propositional attitudes she is the agent

of. One may report of a propositional attitude that it is *de se*, but only with respect to its agent.

According to the literature on the topic, a sentence expressing a *de se* belief [16] has at least these properties:

Ψ) there is a co-referential relation between the holder of belief and an argument A within the complement of that belief,

and

Ω) the believer would be disposed to use the first person pronoun in place of A when describing her or his belief.

Section 2.2 Entailment Relations between ***De Se*** and ***De Re*** Interpretations

Given a theory of how co-reference is represented, Ψ) can be taken as a syntactic statement, while Ω) is a statement of the pragmatics of sentences which have the *de se* attribute, though it should be considered a description at this point; later it will have to be further refined. Further, a *de se* interpretation entails the *de re* (a term meant as neutral between *de se* and *non de se*) interpretation, but not vice-versa. In order to appreciate the directionality of this entailment, consider the following sentence:

(3) Max_1 believes that Sally loves him_1

Suppose that (3) is a *de se* belief ascription, that Max would report (4):

(4) I believe that Sally loves me

This being the case, it will also turn out to be true that the person whom Max believes Sally to love is identical to Max; this last being the sole requirement for the *de re* interpretation to go through. Hence, a *de se* belief ascription entails a *de re* one. Now suppose that (3) is a *de re* interpretation; that Max and the person whom he believes Sally to love are identical. From this it does not follow that Max, an ideally truthful discourse-friendly character, would be disposed to report (4). He might, for some reason, fail to realize what the speaker knows, *viz* that ***he*** is the one whom he believes Sally to love. Max's utterance (as opposed to the speaker of (3)) in this case would be *I believe Sally loves him.* Therefore, as this case demonstrates, a *de re* belief ascription does not entail a *de se* one.

Section 2.3 A Property Peculiar to the Agent of the Intension

Consider the description in Ω) again. A belief which has this property is peculiar to the holder of that belief. That is, the property of *de se* believing something can be applied to no one except the holder of the belief. To put it concretely, if I say that Max has a belief about himself: that Sally loves him, neither my belief, nor yours, nor anyone else's about the situation will have the particular character which Max's belief does because no one else can believe that Sally loves Max and also hold that this very same belief is about himself. This situation contrasts with one which would hold for a *non de se* interpretation of (3). That is, in a situation where Max would **not** use the first person

when describing his belief. The situation in that case would make Max no different than anyone else who believes the object proposition to be true because, at least under the standard *non de se* scenario, Max would not be under the impression that the proposition holds with respect to himself. There is, then, a close fit between the observation that *de se* beliefs are peculiar to their holders and the description in Ω).

Having some idea of the conditions in play for *de se* interpretation, it is worth looking at the conditions surrounding the use of expressions that are not interpreted *de se*. The standard scenario under which a *non de se* interpretation holds involve cases of ignorance on the part of the agent, usually by reason of amnesia. Though I will continue to use this type of scenario as a means of evoking the effect responsible for *non de se* intuition, there is no reason to suppose that this ignorance is a requirement for *non de se* interpretation. Since the usage of the terms is not completely clear in the literature, it is my intent to make the cut between *de se* and *non de se* fall where the dichotomy exists within the language. The utterance circumstances in which the operative condition Ω) does or does not hold can be probed to see whether a dichotomy does indeed emerge. The zero-hypothesis would be to assume that the *non de se* interpretation is merely the obverse of condition Ω). This view leads one to expect that the amnesia scenario is only one kind of situation in which a speaker would fail to use the first person pronoun when referring to himself.

A context in which a speaker might **knowingly** use a pronoun other than first person when referring to himself arises, for instance, in the following example where the speaker of (5) and the person denoted by the underlined phrase are the same. Here, the

pragmatic fact to note is that the speaker wishes to distinguish reference to himself in his professional capacity from his contextual identification as a speaker

(5) The lawyer in this case wishes to make clear that he has no opinion whatsoever regarding the guilt or innocence of his client

In this context (6) should, I think, be counted as a *non de se* report of (5), especially in view of the fact that the speaker of (5) would not necessarily be prepared to utter (7). One might venture to say that he has chosen (5) to communicate precisely that his relationship to the state of affairs fails to include (7).

(6) The lawyer stated that he had no opinion regarding the guilt or innocence of his client

(7) I have no opinion whatsoever regarding the guilt or innocence of my client

The point to take away from the contrasts between situations which warrant the *de se* reading as against those that warrant the *non de se* reading is that the agent's reference to himself in the *non de se* cases is indistinguishable from anyone else's reference to the agent, while the opposite is true in the *de se* cases. These, after all, are the consequences that flow from the use of the third person as opposed to the first. Thus, in ascribing to an agent a *de se* belief, a speaker commits to the claim that the agent holds the belief in a particular form.

Section 2.4 Argument Property versus Clausal Property

It is also useful to observe data which show that *de se*ness (and the antipodal property *non de se*ness) is a property which can be applied to a particular belief in a fairly fine-grained way, so that one can discriminate this property from the complement proposition for any given argument. In particular, there are data which show that given two pronouns co-indexed to the believer, one may be interpreted *de se* while the other is not. Consider (8).

(8) Max_1 thinks he_1 gave a raise to himself_1

Max may have come to this belief in virtue of granting a petition for a raise from an employee whom he fails to realize is himself. In this circumstance, the first pronoun in (8) would be *de se*, the second *non de se*. In a separate circumstance, Max might come to believe that the boss had given him a raise, without realizing that he is the boss.[17] These observations indicate that *de se*ness is not a property which can be said to apply to an entire belief context, but rather it applies to discrete positions within that context. Thus, it seems that we need a positional account of *de se* interpretation.

The question that now arises is whether this special property is in some way grammaticalized such that it tracks anaphoricity and what grammatical relation, if any, there is between *de se* and *de re* interpretations. The relationship between conditions Ψ) and Ω) in characterizing the relevant interpretations, while perfectly plausible as a move from a statement about a representation to a statement about its use, does have

peculiarities that bear examination. It is not at all clear, for instance, why it should be the form of the argument referred to in Ω) that matters.

One way to get purchase on this issue is to focus on the overlap between condition Ω) and the comment noted above that a *de se* belief is peculiar to its agent, one that does not have the capacity to be shared by anyone else. Clearly if Ω) holds in describing someone's belief, then it will also be true that this belief will be peculiar to its agent. The question is whether the latter belief characteristic can be formulated in terms independent of Ω).

Section 2.5 Distinct Forms Give Rise to Distinct Interpretations

It can be shown that Ω) is not a perfect diagnostic for the *de se* interpretation, therefore it cannot, as it stands, be a necessary part of the theory. Even given this fact, the correspondence between first person and *de se* interpretation may still be a very real theoretical primitive. The sentences with contrasting *non de se* or *de se* interpretations examined so far have involved the use of a homophonous pronoun; examining contrasting interpretations with distinct forms will help refine the relation between anaphora and the first person form expressed in Ω). In order to perform this experiment on English data, because of the structural properties associated with the verbs involved, rather than contrasting an agent's beliefs *de se* as against *non de se*, we will need to consider an agent with distinct desire types.

Suppose that Felix is in the kind of quandary such that (9) would be a true report of the (non-contradictory) state of his desires.

(9) Felix wants himself to be chair but he doesn't want to be chair.

What is the nature of the contrast? In the discussion that follows, the differences are examined as arguments that what distinguishes the two conjuncts, thus circumventing contradiction, is that one is *non de se* and the other is *de se*.[18] The circumstances for using (9) are fairly easy to come by; desire contrasts of this sort are a commonplace of creatures with the capacity for plural perspectives. Felix could, for instance, want himself to be chair because he recognizes that his political connections make him a most fit candidate for the job, yet personally not want to be chair because he loathes the idea of possessing the power to affect others' lives. Thus Felix would assert one and deny the other of the statements represented below.

(10) I want [myself to be chair]

(11) I want [PRO to be chair]

Section 2.6 A Property that fails to distinguish among Intensional Agents

The only means independent of Ω) for distinguishing *de se* from *non de se* attitudes discovered thus far is whether or not the attitude is peculiar to the agent. Attitudes that fail to have this characteristic were described above as having the capacity to be shared by other speakers. That is, the subordinate proposition could just as well have come from the mouth of the agent as anyone else under the *non de se* scenario.

Suppose that there are other people in Felix's department who want him to be chair. Under the assumption that the distinction we have before us represents the *de se/non de se* dichotomy, the question the pair (10) and (11) puts before us is which of them would Felix use to express his agreement with the sentiments of his colleagues?

There is a test which demonstrates which expression can be used to express shared desire and which cannot. Consider (12) as performed by Felix:

(12) I want to be chair and Oscar does, too.

The elided clause of (12) only has the meaning that Oscar wants to be chair. There is no meaning on which both Oscar and Felix want Felix to be chair. Thus the expression represented in the complement clause of (11) individuates to the agent of the desire, this property being the hallmark of *de se* interpretation. Consider the same test, again where Felix is the speaker, performed on (10):

(13) I want myself to be chair and Oscar does, too

(13) is ambiguous. On one reading, the strict reading, Oscar and Felix share the desire that Felix be chair. Granting the capacity/incapacity to share an attitude as the relevant linguistic dichotomy, this test shows that there is a *non de se* reading of (10). And on this reading, Felix's desire is the same as that of his colleagues. That is, (10) is Felix's first person expression of the desire he shares with his colleagues. In any of **their** mouths,

(10) would be expressed as (14). Indeed in Felix's mouth, (14) would be a particularly vivid *non de se* assertion.

(14) I want [Felix to be chair]

The desire reported in (10) can be shared between its utterer and others. (11), on the other hand, seems not to have this capacity; it cannot be shared. The second reading of (13), the sloppy reading, on which Oscar wants himself to be chair raises the question whether (10) can also be used *de se*. Pending the discovery of any other distinguishing property, this question amounts to asking whether (10) has the capacity to report that its speaker has a desire that no other agent of desire can share.

Section 2.7 The Grammatical Relation between *De Se* and *Non De Se* Interpretation

The question is non-trivial in several ways. For a start, there are two theoretical positions to explore. The strong version of the theory would be that it is the forms themselves which dictate that (10) and (11) have distinct interpretations. The weak version would have it that the distinction in forms plays a role at the level of use. It may be, for example, that there are independent reasons forcing (11) to have the *de se* interpretation, while the *non de se* interpretation of (10) is, as it were, pragmatically deducible from the fact that the *de se* form was not used.[19] The weak version, then, would be committed to the claim that there is underspecification of form for the *non de se* interpretation. Also some finesse is required in coming to a conclusion about the

representation (and resulting use theory) of (10) and (11) such that the conditions for satisfied desire contrast in their capacity to be shared. These issues are discussed below.

The limitations of Ω) should now be clear. The *de se* sentence, the one which, if true, would be a desire peculiar to Felix, is clearly not the one expressed in (10) even though it is the one containing the first person pronoun. Judgements are equally strong that (11) does express the desire peculiar to Felix. Thus (11), though *sans* a first person pronoun internal to the propositional attitude, expresses the *de se* desire. There is, however, a difference between the case just discussed and the previous examples which bears on the success Ω) should be expected to have. The definitions from which it was drawn (See, for example, Casteñeda (1966)[20]) was designed for cases like (3). Having distinct forms available allows the speaker distinct assertions as the interpretive difference between (10) and (11) shows. This contrasts with cases like (3) where there are two interpretations with only one pronominal form possible in the position it occurs in.

We will return to the question of how to derive the "reported first person" status of in sentences like (11), where no person features are uttered. For now, the question raised by comparing the relationship of the readings associated with (10) and (11) to the two readings associated with (3) boils down to this: What is it about having uttered the ϕ-features (on the pronoun in (3), for example) that prevents either a definite *de se* or a definite *non de se* reading from coming across? Or, put differently, what is it about having **not** uttered any ϕ-features on the pronoun in (11) that puts forth one and only one interpretation for it? One possibility to explore, as mentioned above, is that there is a competition of sorts between two structure in (10) and (11), such that the differences in pronominal form create distinct readings, which the sentences would fail to

unambiguously house were the competing form not grammatically generable. The status of the pronoun in (3) as against that of (10) would differ pragmatically, though not representationally, given a competition style theory of *de se* versus *non de se* interpretation.

How the distinction plays itself out in particular grammatical contexts[21] can be further explored by employing a second kind of ambiguity test to ascertain whether the use of the form which is not the *de se* form results in a *non de se* assertion or whether it merely invites the *non de se* interpretation. That is, an answer to the question raised by the sloppy reading of (13). Consider (15).[22]

(15)
I thought only Felix wanted himself to be chair, but it turns out that Max wants to be chair, too.

The use of "too" implies that the desires of Felix and Max are the same. However, the second conjunct of (15) is infelicitous as a counter-example to the first. The oddness of (15) certainly suggests that the first conjunct does not favor the *de se* interpretation. What the oddness signifies can be further probed. Is it that the *de se* reading in the first conjunct is ruled out altogether, that it is a *non de se* assertion? Put differently, if the weak interpretation of the relation between PRO and the reflexive in this contexts holds true, the reflexive is ambiguous between the *de se* and the *non de se* reading, the bias toward *non de se*ness being pragmatically rather than syntactically engendered. Positing such an ambiguity, it follows that both a contradictory reading and a non-contradictory reading of (16) are available.

(16) No politician wants himself to be president, and Buchanan wants to be president

The contradictory reading of (16), which is certainly available, would require that **[himself]** be interpreted *de se*, since the second clause is clearly *de se*, the status of PRO in that clause being responsible for the unambiguous *de se* reading. The non-contradictory reading of (16), on which Buchanan is like his fellow politicians in failing to want himself for president, but nonetheless harboring presidential desires, also available, would require that **[himself]** be interpreted *non de se*. The strong interpretation of the relation between these two forms of anaphora, -- *viz* that one is a dedicated *de se* anaphor and the other a dedicated *non de se* anaphor -- incorrectly predicts that only the non-contradictory reading should surface.

What these data suggest is that while it is perfectly possible to make *de se* assertions, one cannot make a *non de se* assertion with such structures. The closest one can come is by using a form which is not a dedicated *de se* form in a place where one might have used a dedicated *de se* form. This is why (3) and (10) differ. In making a *de se* assertion, a speaker ascribes a particular form of the intension to the agent. Given the behavior of PRO in the sentences above, it seems that this special ascription form is representationally present. On this view, failing to ascribe to the agent any particular form, that is, where it is irrelevant to the interpretation of the ascription what form the agent believes it under because the forms are characterized by the **speaker's** beliefs, can **imply** a *non de se* meaning. This kind of implication is especially salient for sentences like (10) because of the competing form in (11). For (3), no implication of either *de se* or *non de se* meaning is salient.

Section 2.8 *De Dicto* Interpretations

The fact remains, nonetheless that these two meanings are somehow available for (3). It seems warranted then, to assume that a speaker may ascribe a belief (or other attitude) to an agent which is contingent on the particular form the agent believes it under, even in contexts that afford the speaker no special form dedicated to expressing that contingency. A similar kind of case involving the relation of the agent's belief to a particular spell-out of a name, rather than of a pronoun shows the generality of contingent belief ascription. One can infer from (17), sincerely uttered by Lenny to William F. Buckley, that Lenny believes (18), but may or may not be committed to (19)

(17) You are hilarious

(18) William F. Buckley is hilarious

(19) Lenny believes William F. Buckley is hilarious

because, of course, one may not know whether Lenny has the name "William F. Buckley" in his vocabulary or whether he would assign that name to the person he addresses in (17). (19) is ambiguous in a way similar to the ambiguity of (3). On one reading, the *de dicto* reading, the belief ascription is contingent on Lenny's equation of the person addressed in (17) and the name William F. Buckley, false where Lenny fails to equate them. On the second reading, the *de re* reading, it is the speaker who equates the referents of you and William F. Buckley; here, the form which Lenny would use to express his belief is irrelevant to the truth of the sentence.[23] Presumably, the first

reading, like the *de se* reading of (3) requires some special representation to capture the "contingency of form" aspect of their interpretations. Summarizing, what the *de dicto* and *de se* readings have in common is that both are false unless the form of the ascribed belief, down to individual expressions within it, is the same as the forms in the agent's belief. They differ in that in *de dicto* sentences, the speaker utters the contingent form that the agent would use, but does not in *de se* sentences. If these two types of readings are similar phenomena, as I believe they are, then the contingent form of *de se* readings is, by hypothesis, present at a level disconnected from utterance. *De re* readings (which includes *non de se* readings) are silent, both utterance-wise and representationally, with respect to the form these expressions take for the agent.

Section 2.9 Conclusion

Let us consider that a speaker of (3) might intend that it be interpreted *de se*. What representation would a sentence so intended have? The indexical part of the representation clearly cannot single out the *de se* interpretation, since a *non de se* interpretation would have exactly the same pattern of indices. So, if there is some representational distinction, it will have to come from Ω) or rather, some new version that treats it as a representational statement. This is the topic of Chapter Two.

This section has shown:

*De se*ness is a property of an argument, not the clause it is embedded in

*De se*ness is an interpretation that some expressions directly invoke, while others may be merely compatible with it.

*Non de se*ness has no dedicated representation.

Notes to Chapter One

1. In order to refer to this anaphoric form whose dependency is long-distance in some contexts, LDA is a convenient label in that "anaphor" is widely used for an expression whose reference is dependent on or in some way linked to another expression, blind to the distinction between obligatory and optional co-referencing. Since it occurs in other dependency contexts that are not distant, the term is less handy a designation for the form itself. I will use the term MMA (mono-morphemic anaphora) as a cover-all term for this anaphor type.

2. Except for the bibliographically cited sentences, the data listed here all come from correspondence with my informants: Sunna Gunnlaugsdottir, Egill Halldorsson, Halbert Hallmundson, Vidar Hreinsson, Kári Kaaber, Sigriður Sigurjónsdottir and Höskuldur Thráinsson

3. For some speakers sjalfan sig is less good with a non-subject antecedent than hann sjalfan. With subject antecedents, the opposite is true for these speakers. See also footnote 8.

4. When a syntactic environment allows two forms that are indistinct at some level, (in this case, indexically) the question arises as to whether the two forms are free variants or whether there is some semantic or pragmatic use to the distinction. In the type of case being discussed in the text, the bi-morphemic form is used in circumstances where it is conversationally unexpected for the object argument to have a co-referential reading. What is of note here is that in such syntactic environments, the bi-morpheme is required to be stressed. It would be incorrect to conclude that either form is in some way marked as either default or non-default. Otherwise stress would not be needed. It would seem that the morphological distinction between ***sig*** and ***sjalfum sig*** is not able to carry the distinction through to the semantic or pragmatic level, whereas contrastive stress does carry through to the relevant level. There may well be a phonological explanation for why the bi-morphemic form is more suitable for carrying stress.

5. As far as I can tell, the first account that makes use of this description is Evaraert (1986), but many others adopt it: Hellan (1991), Reinhart and Reuland (1991), Sigurjónsdóttir and Hyams (1991), among others.

6. This is in fact what several theories do claim. The MMA arguments are classified as "pronominal anaphors". This then predicts that the MMA will be ungrammatical in the all the environments that prohibit pronouns, with a caveat concerning the "inherently reflexive verbs". This classification of MMA is due to Anderson (1983).

7. In comparing the possessive cases, we may not have a true minimal pair for the two mono-morphemes, in that the possessive for the MMA is an adjective agreeing in number, gender and person with the head noun, while the pronoun is a DP with genitive case and its own gender, number and person features.

8. In local contexts, dialects vary as to the subject-orientation of MMA. Some Icelandic speakers do not allow sína in (9). For these speakers, the MMA is subject-oriented in all contexts, for others this property holds only where the antecedent is outside of the clause.

9. Again noting that this may not represent a minimal triplet, since the possessives in first and second person, like sig are adjectival, while the third person possessive is a full blown DP in genitive case with ϕ-features independent of the head noun.

10. In Section 1 of Chapter Two, we turn to the distinction between co-indexation and co-referentiality; where once again a divergence emerges between hann as against sig, mig and þig.

11. In the Section 2, Chapter Two discussion, examples with quantified antecedents further support this claim.

12. As will be discussed in Chapter Two, the interpretation of the MMA is *de se* regardless of locality. The pronoun in the tensed clauses where MMA is also grammatical, is interpretable as either *de se* or as *non de se*.

13. For Reinhart and Reuland, long-distance MMA are classified as logophors.

14. This example comes from Jerry Fodor's (1975) paper, which investigated some aspects of anaphora, including that exemplified by *de se* interpretations.

15. It might be objected that at the outset, a linguistic take on the problem prevents me from characterizing *de se* beliefs of creatures that possesses no grammar. That is, surely dogs possess *de se* beliefs. This is undoubtedly so; further, the psychological conditions that would describe a *de se* dog belief and a *de se* human belief may be strikingly similar. But I am only interested here in describing the linguistic conditions for the representation of a *de se* attitude and so it is an advantage that the theory described here goes no further into the psychology of beliefs than the grammar does. The distinction cuts the phenomena down to an empirically assessable size.

16. The description of *de se* interpretations is not limited to *de se* beliefs, but the literature on the intuitions has traditionally been focused on belief. The description given in the text is meant to apply to other propositional attitudes.

17. Reversing the order to obtain a *non de se* interpretation of the first pronoun, followed by a *de se* interpretation of the second does not seem to be as fully acceptable.

18. The claim that the two clauses are formally distinct is factual and thus can be neither strengthened nor weakened, but there are many types of data which can be marshaled to elicit a sharper intuition with respect to the contrast. For instance, in both (i) and (ii), the statement given in the because-clause would not be able to function as an **explanation** of the statement in the first clause if there were not a real semantic difference between them.

(i) Colin failed to want himself to be president because he didn't want to be president.
(ii) Colin failed to want to be president because he didn't want himself to be president.

19. There are two other logical possibilities neither of which are not discussed here. The possibility that the *non de se* form might be the form whose interpretation is determined in and of itself, irrespective of pragmatic competition considerations is discussed in Chapter Two. That possibility presents an interesting diagnostic picture because it is much easier to come up with *non de se* scenarios that litigate either way than to come up with *de se* scenarios that exclude *non de se* readings. The possibility that neither form determines an interpretation does not seem feasible for it would imply that each relies on the other for a contrasted meaning; an infinite regress results. Thus, if meaning, syntactically and semantically driven, and use are all we have for explaining discriminable comprehension, at least one form, if not both, must have its interpretation grounded in representation.

20. Part of the issue for Casteñeda was whether pronouns in sentences like (3) are ambiguous, as he claimed, or merely vague.

21. Conditions will differ in contexts that allow PRO vs a reflexives from, say, contexts that allow little *pro* vs. an overt pronoun, and again from contexts that allow long-distance anaphors vs pronouns.

22. Thanks to Harriet Taber for coming up with this example.

23. The *de dicto/de re* puzzle is usually presented as a substitution problem (see Schiffer 1987) revolving around two equivalent names. Suppose there is a speaker who has another name for William F Buckley, say "Billy boy" and that Lenny knows William F Buckley only by the name "William F Buckley". This speaker may substitute the latter for the former, as in (i)

(i) Lenny believes Billy boy is hilarious

On one interpretation of (19), truth is preserved under this substitution. On the other reading, the *de dicto* reading, the speaker must, in effect, use Lenny's expression in order

to make a true belief ascription. I leave this aspect of the relation between *de re* and agent ascription somewhat to the side because in the case of *de se* ascriptions, no speaker can use for reference another's "I".

Fit the Third
The Baker's Tale

From *The Hunting of the Snark, An Agony in Eight Fits*, by Lewis Carroll

"I skip forty years," said the Baker in tears
And proceed without further remark
To the day you took me aboard your ship
To help you in hunting the Snark

"A dear uncle of mine (after whom I was named)
Remarked when I bade him farewell – "
"Oh, skip your uncle!" the Bellman exclaimed,
As he angrily tingled his bell.

"He remarked to me then," said that mildest of men,
" 'If your Snark be a Snark, that is right:
Fetch it home by all means – you may serve it with greens,
And it's handy for striking a light.

" 'You may seek it with thimbles – and seek it with care;
You may hunt it with fork and hope;
You may threaten its life with a railway share;
You may charm it with smiles and soap – ' "

" 'But oh, beamish nephew, beware of the day,
If your Snark be a Boojum! For then
You will softly and suddenly vanish away
And never be met with again!'

"I engage with the Snark – every night after dark –
In a dreamy delirious fight:
I serve it with greens in those shadowy scenes,
And I use it for striking a light."

Fit the Eighth
The Vanishing

They hunted til darkness came on, but they found
Not a button, or feather or mark,
By which they could tell they stood on the ground
Where the Baker had met with the Snark

In the midst of the word he was trying to say,
In the midst of his laughter and glee,
He had suddenly vanished away –
For the Snark *was* a Boojum, you see.

Chapter Two

It will be argued in this chapter that dedicated *de se* pronouns are a part of the grammar of natural language. This chapter lays out the formal semantics of *de se* pronouns and sets forth a theory of how the morphology of these elements contributes to their interpretation. The distributional and interpretive behavior of MMA, of phonologically null pronouns, as well as the patterning of verbal agreement with nominative subject are explored in order to adduce this conclusion.

Section 1 The Interaction of Indices and Person Features

Section 1.1 Assumptions

In this section, the behavior of third person pronominal forms is shown to be different from the other pronominal forms. I assume here that Binding Theory is sensitive to the morphological shape of pronominals, rather than labels like [+pronoun] or [+reflexive]. Hence, I will refer to the pronominal referential expressions as either bi-morphemic or mono-morphemic pronouns, not "pronouns" and "reflexives". It is assumed therefore that bi-morphemic pronouns are subject Principle A, and mono-morphemic pronouns are subject to Principle B. The Binding Theory I assume is essentially the same as the theory laid out in Chomsky (1981). The relevant principles are as follows:

Principle A: Bi-morphemic pronouns must be bound in their governing category

Principle B: Mono-morphemic pronouns must be free in the governing category

α binds β iff α and β are co-indexed and α c-commands β

α c-commands β if the first branching node dominating α also dominates β.

If β is not bound then it is free.

Governing Category is defined as in Chomsky (1981) – the smallest NP or S containing the pronoun and its governor. The label of these syntactic phrase markers can be updated to DP and IP with impunity. I assume that both of these referential expression types are full maximal projections (DPs). A referential expression that lacks a phonological matrix is assumed to project to a full DP, and to count as mono-morphemic. Thus PRO and little *pro* are indistinct in type with respect to Binding Theory. Clitics, I will assume to be heads (D^0) which do not project any higher. This type of referential expression will not be treated here.

Section 1.2 Introduction

The purpose of this chapter is to lay out a unified theory of the distribution and interpretation of the MMA (mono-morphemic anaphor) form in its local, long-distance and logophoric domains. The data in Chapter One show that the range of distributional and interpretive behavior of MMA can be explained neither by Principle A nor Principle B of the Binding Theory. In comparing MMA to the other indexical expressions, there are two ways a theory can go. Either MMA is governed by Binding Theory or some other factors determine its behavior. Following the first prong of this choice brings before one the prospect of complicating the simple beauty of Binding Theory. For the sake of capturing this subset of data, the principles would have to be enriched such that the data under their purview are cut into pieces that overlap at specific vertices. The other

possibility is that the distributional account of MMA falls outside of Binding Theory's dominion. Whichever theoretical path is taken, one would hope to find some property of MMA that makes it different from the other referential elements treated by Binding Theory. As has been suggested in virtually every theory of MMA, a reasonable choice might be its morphological make-up.

In the morphological make-up of pronouns, reflexives and the like is a segment ϕ, which has been traditionally assumed to indicate grammatical number, gender, and person features[1]. The three function quite differently. There are semantic entailments that follow from the particular number morpheme attached to a referential expression. Further, it is a feature that is relevant to all referential expressions, not just pronouns. Gender is like number in that it is a feature which is assigned once and for all to the expressions in a discourse. That is, aside from discourse which concerns itself with questions of establishing the socio-biological gender of a discourse entity, the grammatical gender of an expression employed to refer to that entity remains fixed throughout the discourse in which it is employed. Person features are of a different ilk. They are functional in nature. In a given discourse, as one is addressed, or addresses another or is spoken about by others, the person features of the expression which refers to one change with respect to these functions. The reference value remains constant across these various morphological shapes. Take the following little exchange as an illustration:

Speaker A: Calm down, Trudy. Driscoll loves you.

Trudy: He does?

Speaker C: I'm not so sure he really does.

If Speaker A is addressing Trudy, Trudy is addressing Speaker A, and Speaker C is addressing Speaker A, the two elided VPs are construed as [$_{VP}$ **love me**] and [$_{vp}$ **love her**]. Thus the form the pronominal expression referring to Trudy takes is determined by the relation between the speaker and Trudy in terms of their roles in the conversational turns of their discourse; the expression used to refer to Trudy moves from "you" to "me" to "her" in this discourse.

Section 1.3 Comparison of Icelandic Personal Pronouns

It is useful to break down the distribution of ϕ-features a little further still. Gender features appear for only a subset of pronouns. The lack of gender features in first and second person pronouns is a widely seen but not universal property of pronominal systems.[2] The split in gender assignment might be a clue in understanding the operation of the pronominal system in Icelandic. Similarities in the behaviors of gender-bearing pronouns which contrast with those of the non-gender-bearing pronouns would be very difficult to explain if there were not a genuine typological divide between them. Below I show some contrasts in their behaviors in syntax, phonology, and morphology.

Section 1.3.1 Phonological Comparison

At a purely phonological level, MMA is much more like the 1st and 2nd person

pronouns than the gender-bearing pronouns, as the following table shows.

Table 1 First Person, Second Person, and MMA Pronouns

		1st Person	2nd Person	MMA	3rd Person, Masc, Fem, Neuter
S	Nominative	ég	þú	-----	hann, hún, það
I	Accusative	mig	þig	sig	hann, hana, það
N	Dative	mér	þér	sér	honum, henni, því
G	Genitive	mín	þín	sín	hans, hennar, þess
P	Nominative	við	þið	-----	þeir, þær, þau
L	Accusative	okkur	ykkur	sig	þa, þær, þau
U	Dative	okkur	ykkur	sér	þeim
R	Genitive	okkar	ykkar	sín	þeirra

In fact, the gender-bearing pronoun resembles the definite determiner and definite suffix very closely. The table below shows that the differences between them are minimal.

Table 2 Definite article, Definite Suffix and Third Person Pronouns

Free Definite Article				Pronoun			Definite Suffix		
	masc	fem	neut	masc	fem	neut.	masc	fem	neut
sing nom	hinn	hin	hið	hann	hún	það	-inn	-in	-ið
sing acc	hinn	hina	hið	hann	hana	það	-inn	-ina	-ið
sing dat	hinum	hinni	hinu	honum	henni	því	-num	-inni	-nu
sing gen	hins	hinnar	hins	hans	hennar	þess	-ins	-innar	-ins
plur nom	hinir	hinar	hin	þeir	þær	þau	-nir	-nar	-in
plur acc	hina	hinar	hin	þá	þær	þau	-na	-nar	-in
plur dat	hinum	hinum	hinum	þeim	þeim	þeim	-num	-num	-num
plur gen	hinna	hinna	hinna	þeirra	þeirra	þeirra	-nna	-nna	-nna

Section 1.3.2 Morphological Comparison

Inspecting the behavior of the pronouns within the reflexive paradigm, we also see a difference in ordering possibilities. The gender-bearing pronoun is invariably before the -sjalf adjective, while the order is free for the non-gender-bearing pronouns.

mig sjalfan	sjalfan mig
þig sjalfan	sjalfan þig
sig sjalfan	sjalfan sig
hann sjalfan	*sjalfan hann

Another morphological difference is that there is an adjectival form of the 1st, 2nd, and MMA pronoun. These are the possessive adjectives and they agree in person number and gender with the noun head. The following table shows the full declension for adjectival pronouns – only for the adjectives that refer to singular possessors, the equivalent of "my" "your" and "self's", omitting the equivalent of "our" "ya'll's" and "their own". The 'possessor role' is expressed with the genitive case for the gender-bearing pronouns instead. The gender-bearing pronoun is never expressed as an adjective, perhaps because in bearing its own gender feature, it cannot also bear an additional gender feature for the noun head.

Table 3 First Person, Second Person, and MMA Possessive Adjectives

		NOM	ACC	DAT	GEN
F	Masc. Sing	minn	minn	mínum	míns
I	Fem. Sing	mín	mína	minni	minnar
R	Nuet. Sing	mitt	mitt	mínu	míns
S	Masc. Plur	mínir	mína	mínum	minna
T	Fem. Plur	mínar	mínar	mínum	minna
	Nuet. Plur	mín	mín	mínum	minna
S	Masc. Sing	þinn	þinn	þínum	þíns
E	Fem. Sing	þín	þína	þinni	þinnar
C	Nuet. Sing	þitt	þitt	þínu	þíns
O	Masc. Plur	þínir	þína	þínum	þinna
N	Fem. Plur	þínar	þínar	þínum	þinna
D	Nuet. Plur	þín	þín	þínum	þinna
M	Masc. Sing	sinn	sinn	sínum	síns
	Fem. Sing	sín	sína	sinni	sinnar
M	Nuet. Sing	sitt	sitt	sínu	síns
	Masc. Plur	sínir	sína	sínum	sinna
A	Fem. Plur	sínar	sínar	sínum	sinna
	Nuet. Plur	sín	sín	sínum	sinna

Section 1.3.3 Syntactic Comparison

In the vast majority of predicate types, the mono-morphemic pronouns[3] behave exactly the same in the presence of binding: they are ungrammatical, while their bi-morphemic counterparts are grammatical.

Table 4 Bound Arguments in Open Class Predicates

		mono-morpheme	bi-morpheme
berja to hit	1st	* Ég barði mig	Ég barði sjálfan mig
	2nd	* Þú barðir þig	Þú barðir sjalfan þig
	MMA	* Olaf barði sig	Olaf barði sjalfan sig
	3rd	* Olaf barði hann	Olaf barði hann sjalfan
hlæja að to laugh at	1st	* Eg hló að mér	Eg hló að sjalfum mér
	2nd	* Þú hlóst að þér	Þú hlóst að sjalfum þér
	MMA	* Olaf hló að sér	Olaf hló að sjalfum sér
	3rd	* Olaf hló að honum	Olaf hló að honum sjalfum
benda á to point at	1st	* Ég benti á mig	Ég benti á sjálfan mig
	2nd	* Þú bentir á þig	Þú bentir á sjalfan þig
	MMA	* Olaf benti á sig	Olaf benti á sjalfan sig
	3rd	* Olaf benti á hann	Olaf benti á hann sjalfan

There are other verbs, however, in which the gender-bearing referential expressions part company with the others.

Table 5 Bound Arguments in closed-class predicates and ECM structures

		mono-morpheme	bi-morpheme
ræskja to clear the throat	1st	Eg ræsk mig	*Eg ræsk sjalfan mig
	2nd	Þú ræskjur þig	* Þú ræskjur sjalfan þig
	MMA	Jón ræskjur sig	* Jón ræskjur sjalfan sig
	3rd	* Jón ræskjur hann	* Jón rææskjur hann sjalfan
raka to shave	1st	Eg raka mig	Eg raka sjalfan mig
	2nd	Þú rakar þig	Þú rakar sjalfan þig
	MMA	Pétur rakar sig	Pétur rakar sjalfan sig
	3rd	* Pétur rakar hann	Pétur rakar hann sjalfan
meiða to hurt	1st	Eg meiddi mig	Eg meiddi sjalafan mig
	2nd	Þú meiddir þig	Þú meiddir sjalfan þig
	MMA	Pétur meiddi sig	Pétur meiddi sjalfan sig
	3rd	* Pétur meiddi hann	Pétur meiddi hann sjalfan
telja to believe ECM verbs	1st	Ég tel mig vera skrytinn	Ég tel sjalfan mig vera skrytinn
	2nd	Þú telur þig vera skrytinn	Þú telur sjalfan þig vera skrytinn
	MMA	Jón$_1$ telur sig$_1$ vera skrýtinn	Jón$_1$ telur sjalfan sig$_1$ vera skrýtinn
	3rd	* Jón$_1$ telur hann$_1$ vera skrýtinn	Jón$_1$ telur hann$_1$ sjalfan vera skrýtinn

Section 1.4 The Place of Person Features in the Pronominal System: Ground Versus Non-ground

In these sentences we see that once again, the MMA falls together with 1st and 2nd person pronouns. The lack of gender features would not seem to predict this distribution. A more intuitive description of these forms could be gained by taking notice of the

discourse role associated with the differences in their person features. At least for 1st and 2nd person, it is clear that there is a functional role of a sort tied to their interpretations, a role that is determined by the context local to their deployment. What personhood expresses is a distance value from an established point in discourse space. In the domain of utterances, the point is established by the utterer. If an utterance field is determined only by the discourse roles it can assign, it would seem that those roles ought to be determinable by the relation to the utterance. To give this notion terms, let us say that an utterance *grounds* a pronoun with 1st person features if it is uttered by the referent of that pronoun. An utterance grounds a pronoun with 2nd person features if it is addressed to the referent of that pronoun. As for 3rd person pronouns, since there is no relation local to the utterance that determines a discourse role for them, they are never grounded. Taking the phonological, morphological and syntactic differences in the pronominal types seen in the above tables as differences indicating the capacity to be grounded, this would be to say that the 1st and 2nd , but not 3rd person pronouns have a ground feature. If this is the right way of looking at things, the ground feature and the gender feature are in complementary distribution in Icelandic and more generally in Indo-European and many other languages. It seems for this type of language, if an argument expression is -gender, it is +ground. At least for overt non-quantificational argument expressions, this is an exhaustive statement.

The place of the MMA in the pronominal system is difficult to assess. The fact that it shows no gender features doesn't necessarily make it a ground pronoun, since it shows no number features either. A commonly held assumption in fact is that it hasn't

any features at all. Still, given its distributional, phonological and morphological similarities with 1st and 2nd person pronouns, it is worth investigating the possibility that it is a ground pronoun, rather than a featureless one. In investigating this possibility, the question now becomes not what is the place of MMA in Binding theory, but what is the place of ground pronouns in Binding Theory. With the aim of providing a response to this question, it is appropriate to discuss data involving ground pronouns vis-a-vis their relation to Binding Theory.

Section 1.5 Coreference and Co-indexing Effects with Ground Pronouns

In studying the dependency properties of anaphora, researchers have tended to focus on the system of third person expressions, leaving the behavior of first and second person expressions largely unexplored. Probably the two main sources of this neglect are that it has been assumed that the interpretation possibilities of first and second person pronouns, unlike third person pronouns, are unambiguously determined by the utterance context. Secondly, it has been assumed that while some sort of principle is required to state the possible reference relations between a third-person pronoun and an expression that has context-independent content, a theory for the first and second person system, being purely context-driven, needs no such principle. The ideas being laid out here will, I hope, undermine the former assumption and broaden the application of the latter.

I will start with the flat declaration that there is more to the interpretation of a referential expression than its reference. Traditionally, this fact is demonstrated by presenting the effects of referential expressions in intensional contexts, however it is

evident outside of such contexts with the use of first and second person persons. For example, there is an interpretive contrast between the following pair[4].

(1) Ég elska sjálfan mig

I love myself

(2) Ég elska mig

I love me

(1) is an assertion that the speaker of it is a self-lover. (2) is something else; for, although (1) may be used in the same situations, the use of (2) calls up a smaller set of situations. For an instance, it can mean that its speaker loves the public image of himself; for another, it may be used in a situation in which the speaker is viewing an image of himself on a home-video. The corresponding pair in second person has the same commentary. In this small set of situations, what difference does the speaker convey by using (2) as opposed to (1)?

What are we to make of (2) in terms of Binding Theory? Is Principle B off for first and second person pronouns? It seems unlikely that such a conclusion is warranted (or what may amount to the same thing, it is theoretically unaesthetic) since Principle A is still required for first and second person reflexives. The outcome of the hypothesis that Principle B applies equally to all pronouns would force contra-indexation between the co-arguments of (2), thus yielding the representation in (3).

(3) $Ég_1$ elska mig_2

I love me

This hypothesis can be tested. Consider the same pair as part of an ellipsis.

(4) Ég elska sjálfan mig og Pétur gerir það líka

I love myself and Peter does that too

(5) Ég elska mig og Pétur gerir það líka

I love me and Peter does that too

(4) has only the "sloppy" reading, that is, the elided section can only mean that Pétur loves himself. (5), on the other hand, has only the "strict" meaning. It can only mean that Pétur also loves me. There are various conclusions one may draw from the interpretation of the ellipsis site. The strict reading of (5) might arise in either of two ways. Ég and mig could be contra-indexed, or it could be that they are co-indexed and the reference of mig is determined by means entirely separate from those that determine the reference of Ég.[5] The latter explanation would require yet another explanation for the unavailability of the sloppy reading. There would have to something to prevent the object pronoun from being dependent on its antecedent, if it is maintained that they are co-indexed. If they are contra-indexed, nothing more is needed; in effect Binding Theory prevents the sloppy reading. Consider the sentence below.

(6) Eg sagði að hund biti mig og Olaf gerði það líka

I said that a dog bit me and Olaf did that too

(6) has both a strict and a sloppy reading. It is clear, given the existence of the sloppy reading, that it cannot be said that there is property of this type of pronoun such that it must be interpreted as a pronoun whose reference must be determined independently of any other expression. This is the untenable position one would have to take, however, in order to maintain that Ég and mig in (5) are co-indexed.

Given Principle A, (1) will have co-indexed arguments. Selecting a situation in which either (1) or (2) can be used, say the home-video situation, the speaker of (1) says that he and the person in the home-video are the same, whereas the speaker of (2) says there is some difference. But since both "Ég" and "mig" are indexicals of the same individual, namely the one who has uttered the sentence, how could a distinction be intelligibly drawn?

It is clear from just this tiny portion of data that in the grammatical system there are more ways than one to designate an object. The lexical properties that inhere in pronominal features do one sort of designation; the sequence of indices which models the entities in the discourse does another sort. If a careful theory of how each of these systems operates is put together, interactions of the type discussed above should fall out. What is needed is a system that makes the fairly flat prediction that a speaker will choose expressions with distinct indices wherever she wishes to make distinctions between them. That is, the model of how reference with natural language works should reflect the

various usages to which referential expressions can be put. The individuals, concepts and entities in discourse are regularly discussed with differing aspects in focus. When speaking of a person for example, we may view the public and private aspects of her as one, or we may choose to give separate senses to these two aspects of her. It is a desideratum of semantic theory to provide the means for generating a mechanism that reflects the various expressive properties we believe language to have. One such means is the construction of a discourse model. There are many ways that this might be done[6] A parsimonious theory would be one that incorporates sequences of indices assumed in Binding Theory into the machinery of modeling the discourse. So that distinctions of the public versus private sort, or a video image of an object versus the physical object can be accommodated, the class of things that constitute a member of the sequence of indices would need to include senses. The notion of sense I have in mind here is Frege's notion as first expostulated in "Sense and Reference" (1892).[7] In integrating the sequence of indices into the system which models the discourse, it is incumbent upon the semantic theory to provide a link between indices and reference supple enough to account for the distinctions in interpretation as well as the distributional facts of referential expressions.

Given a circumstance in which a speaker wishes to distinguish one aspect of an object from another, two instances of a single index will be of no avail. In a sentence like (1), the person features of the pronouns yields the speaker for both of the arguments. The indices are identical as well, in obedience to Principle A of the Binding Theory. The two pronouns in (2) also designate the speaker, but in obedience to Principle B, the indices differ. Thus we seem to have co-reference between a pair of non-coïndexed arguments.

Now, there is nothing in the principles of Binding Theory at all that prevents absolute identity of reference between two arguments that are non-coïndexed. On the contrary, there are many types of circumstances in which it suits the purposes of the speaker to have co-reference that is not mandated by the representation. Fiengo and May (1994) present a catalogue of such cases in Chapter One of *Indices and Identity*. For example, the speaker of (7) and (8) makes use of the verb of identity in order to **assert** identity between the two arguments, where the pronouns are used deictically.

(7) He is Max

(8) Max is him

Were the two arguments co-indexed, the verb would do no work expressing the identity, and indeed there would be no contrast with negated versions of these sentences. In other circumstances discussed in Fiengo and May (1994), a speaker may wish that his interlocutor infer co-reference. Inference to any conclusion is only possible where the matter is left open. Using a structure with co-indexed arguments would not leave the matter of identity open; co-indexing two arguments grammatically determines identity between them. Fiengo and May (1994) argue that given this grammatical determination, there is an implicature of non-coreference between non-coïndexed arguments. Given sufficient grounds, however, this implicature can be cancelled. One of the examples of inferred coreference given in Fiengo and May (1994) involves an inference that relies on shared premises between speakers. A typical scenario would go something like this:

Scenario: A man angrily spitting and cursing comes into an office where speakers A and B are working. He conducts his business then leaves slamming the door behind him in a rage.

Speaker A: Oh my god, who was that jerk?

Speaker B: Well, dear, he signed for Martin Longshore's paycheck

Premise: People sign for their own paychecks, no one else is authorized to do so.

Conclusion: That jerk is Martin Longshore

Again, the moral to draw from this homily is that Speaker B, intending co-reference between Martin Longshore and he, expects Speaker A to infer this, given the premise. In view of Principle C (a prohibition on names being bound) the two expressions are necessarily contra-indexed, yet the inference goes through.

The occasions for using a sentence with contra-indexed expressions where co-reference holds are not exhausted. Let us return to the implicature that is brought into play between sentence pairs involving the use of a pronoun versus a reflexive. Take, for example this pair:

(9) Ég barði sjálfan mig

I hit myself

(10) Ég barði mig

I hit me

These two sentences do not have the same uses at all. On the assumption that Principle B forces contra-indexation between the arguments in (10), we have a case of implied non-coreference. But the person features for both arguments indicate the same entity, the speaker, thus giving rise to a co-referential relation between them. In a scenario where the speaker is seated in front of a movie screen upon which an image of himself appears that so fills him with such despair that he hurls a can of coke at the image, he may report that episode by using (10). It is possible to make some distinction between the agent and the recipient of that hurl with a contra-indexed pair, while the co-indexed pair of (9) allows of no such distinction. (11) is the representation of (10), in accordance to Principle B of Binding Theory.

(11) Ég_1 barði mig_2

I hit me

With this representation, it is possible to describe with some precision what is being asserted by the speaker. The image on the screen represents the speaker. This image is but one sense of the speaker, to which he can refer. The image representation is referred to in the 2nd position of the sequence in (11). The 1st position refers to a different sense of the speaker, for example, the sense he has of himself at the moment of uttering (11).

A speaker who uses (9) in the situation described would induce a very odd presumption, viz, that the image of himself is a part of himself, the way that his head or leg is. For a speaker may certainly use (9) to report an incidence of his hitting himself in the head or leg or any part of himself. In contrast, (11) is a not a good vehicle for reporting this behavior, precisely because of the distinction brought about by contra-indexation. The implementation of index assignment here argues for a very fine-grained universe of entities available to the sequence. By contrast, it seems that the assignment relation brought about by the morphology of person features is far cruder. They merely play a lexical role, designating the speaker in the cases of (11) and (9).

The theory put forward here permits indexical sequences to map to referents via the lexical mapping functions of pronominal features. The standard index-to-individual mapping must also be allowed to make its contribution in the grammatical theory being develpoed here. This theory predicts that, in principle for any transitive verb, there ought to be two meanings associated with any sentence in which the subject and object are first person pronouns, (or second person), one sentence using co-indexation and one not. Then it is a matter of pragmatics whether there is a use for such a distinction. A sentence like (2) in the third person, that seen in (12), gives the addressee no reason to suppose that the referents of the contra-indexed expressions co-refer.

(12) Jón$_1$ elskar hann$_2$

Jón loves him

This is because the person features alone do not direct the addressee to anyone in particular, whereas the indices, being non-identical, give rise to the implicature that the referents are distinct.[8] The contrast between this case and the above cases demonstrates that the interpretation of (2) and (10) rely, for the inference of coreference, on person-features. That is, for the cases discussed so far, the sole mechanism available for the addressee to make the inference that the referents of the contra-indexed expressions are two senses of the same entity is the information contained in the first person expressions. The lexical capacity that allows this inference to be made is not part of the makeup of third person pronouns.

In this section, I have argued to the conclusion that bi-morphemic pronouns are subject to Principle A and mono-morphemic pronouns are subject to Principle B. There are two environments for which this classification is problematic. They appear in Table 5 – the so-called inherently reflexive constructions and ECM constructions. Given this claim, Principle B should rule out all bound mono-morphemes in these environments. In fact, though, only 3rd person pronouns are ungrammatical. Thus, the ungrammaticality of the sentences in (13) and (13a) is correctly accounted for, while the grammaticality of those in (14),(14a) (15), (15a) and (16) (16a) remains unaccounted for.

(13) * Jón$_i$ ræskjur hann$_i$

Jon cleared him

'Jon cleared his throat'

(13a) * Jón$_i$ telur hann$_i$ vera skrýtinn

Jon believes him to.be strange

(14) Eg_1 ræsk mig_1

I cleared me

'I cleared my throat'

(14a) Ég tel mig vera skrytinn

I believe me to.be strange

(15) $Þú_1$ ræskjur $þig_1$

You cleared you

'You cleared your throat'

(15a) $Þú_1$ telur $þig_1$ vera skrytinn

You believe you to.be strange

(16) $Jón_1$ ræskjur sig_1

John cleared self

'John cleared his throat'

(16a) $Jón_1$ telur sig_1 vera skrýtinn

Jon believes self to.be strange

A possible solution would be to claim that both types of environments represent exceptional case-marking. The inherently reflexive verbs are a closed class, representing actions that involve specific parts of the body. For raka (shave), for example, the body part is the face. For ræskja, (to clear the throat) the body part is the throat. For greiða (to comb), the body part is the hair. For þvo (to wash), and meiða (to physically hurt), the whole body is the body part involved. In order to meet the challenge posed by this class of verbs, the following proposal is offered. These 'body-part' verbs generate a complement argument which has an empty, unspecified noun-head. Each such verb triggers a presupposition as to the identity of the unspecified noun – raka triggers "face", greiða, "hair", and so on. Syntactically, a DP of this type would be anomalous, appearing

as shown in (17).

(17) $[_{DP}\ [_{D}\ \varnothing]\ [_{NP}\ \varnothing]\ ]$

(17) would be anomalous, that is, if it occurs in a position that requires case. Now, it was shown (see Table 3) that only the ground pronouns have adjectival forms, while the gender-bearing pronouns do not. This difference is exploited for the purpose of the present proposal thusly: The adjectival pronouns can appear with an empty noun, in certain circumstances, a presuppositionally supplied noun being one such circumstance. The accusative complement of the "body-part" verb <u>ræskja</u>, (clear) should then surface, not as (17), but as (18), where the adjectival form is first person accusative possessive.

(18) $[_{DP}\ [_{D}\ \varnothing\ ]\ [_{AP}\ \underset{my^{ACC}}{minn}]\ [_{NP}\ \varnothing]\ ]$

If the identity of the empty NP, were a pro-form, rather than a specific one, the grammar of Icelandic would conceivably generate (18) instead of the accusative argument seen in sentence (14).[9] As it is, (18) is still anomalous in terms of case because there aren't any noun features in the empty NP for the adjectival pronoun to agree with, and the DP as a whole still does not have any case. I therefore propose an exceptionally case-marked structure for DPs of this type. In lieu of (18), the dative complement of the verb <u>ræskja</u>, (clear) surfaces as (19), where the adjective-head moves to the determiner head and

receives accusative case.

(19) $[_{DP}\,[_{D}\,mig_{i}\,]\,[_{AP}\,e_{i}]\,[_{NP}\,\varnothing]\,]$

In (19), both the DP projection and the AP projection are headed by the same entity. The effect of is to make (19) a bi-morphemic pronoun. In all of the "body-part" verbs, such a structure is generated, licensed only where the verb triggers a presupposition which identifies the NP. The exceptionally case-marked complements of such verb, being bi-morphemic, will be subject to Principle A, rather than Principle B. On the basis of this hypothetical morphological structure, (14), (15) and (16) are now correctly determined to be grammatical. The status of (13) is unchanged, because the gender-bearing pronouns do not occur as adjectives. Thus, they will never undergo the "body-part" exceptional case-marking that their ground pronoun counterparts do. The Binding Theory status of ground pronouns in the open class of predicates is unchanged by this hypothesis as well. That is, ground pronouns cannot become bi-morphemic willy-nilly. If they could, we would expect sentences like (20) to be grammatical.

(20) * $Ég_{1}$ barði mig_{1}

I hit me

The verb berja (to hit), and the other open class set of predicates fail to trigger any

specific presupposition which could license an empty NP of the type seen with the closed-class "body-part" predicates. For this reason, the object pronoun in (20) is mono-morphemic, subject to Principle B. Accordingly, it is ruled out as desired.

If the exceptional case-marking account just rehearsed effectively accounts for the distribution of the ground pronouns in examples like (14), (15) and (16), there is still the residue of the ECM structures seen in (14a), (15a) and (16a). Ideally, these should be captured by a mechanism which would license the accusatively cased pronouns as bi-morphemic, similar to the structure hypothesized for the "body-part" pronouns. As of this writing, no plausible mechanism occurs to me, thus the ECM data remain recalcitrant.

Section 2 A Theory of Context

At this point, it is meet to make formal what seems intuitively to be the explanation for the differences between the behavior of third person expressions on one hand, and first and second person expressions, on the other. This might be done in a myriad of fashions; the particular model I am using for expository purposes, is one I have designed in the hopes that it adds as little to the necessary theoretical apparatus as possible. This model incorporates an elaborated version of the notion of a formally defined ***context*** developed by Fiengo and May in *Indices and Identity* (1994). The term is introduced there in a discussion surrounding the status of indices in semantic theory. Representationally, an index is merely a member of a sequence of integers. The point in Fiengo and May (1994) is that the assignment of individuals to positions within a

sequence is an interpretive function, therefore the assignment of an individual to a position (represented by an index) is always relative to the sentence the index is embedded in. The sentence content anchors the sequence to the particular set of entities referred to by the speaker of the sentence. A context is a formal construal of linguistic structure, for them, the semantic evaluation of a sentence relative to a sequence of assignments for that sentence. An expression with the index ***i*** is evaluated relative to whatever occupies the i^{th} position in the sequence. The link between the syntactic expression bearing the index and the assignment to that indexed position **is** the context because the sequence models the context. So, a context is a relation between a linguistic structure and a set of valuations relative to it. Each context is interpreted via a two-pass system, one for reference assignment, and one for truth-value assignment. Their semantic notion *valuation* expresses this relation as follows:

Val(χ, Φ, σ)

This is read as "χ is the value of expression Φ with respect to sequence σ". Individuals in the domain are brought into the discourse via the expressions used to refer to them. Inasmuch as each expression is a member of a sequence which is relativized to the context, the identity of an expression is inherently dependent on its context.

Although it is unstated in Fiengo and May (1994), sequences can be distinguished from one another if their contexts are distinguishable. I extend the use of context here to accommodate certain crucial properties that are known to be contextually-determined. In my extension of Fiengo and May (1994), contexts also determine what will be called discourse roles. The discourse role of an expression is a property of the context it occurs

in, a relation between an actant and a context. I will refer to the union of the individuals in the discourse domain with the individuals defined by the discourse roles as actants. These factors belong to the general class of indexicals, expressions like "this/that" "here/there" "now/then". What the members of this class have in common is that their evaluation is dependent on the very local, ambient environment of the utterance. In section 1.5 above, I introduced a version of semantic theory in which a sequence of indices models the discourse. This semantic theory follows that of Fiengo and May (1994) for whom this sequence of indices has semantic value only relative to a sentence. I adopt their notion of contextualized sequence, wherein the sequence sets a context relative to the sentence in which the indices appear. "Context", then, is a defined term – an evaluated sequence, where the values are set with respect to the particular sentence in a particular use. I argued above for including senses as well as objects among the things that the set of indices of a context can range over.

To accommodate the expressions in the class of indexicals, instants and intervals of time, as well as points and regions of space will need to be included in the range of contexts as well. Let us take the relation of context factors to the valuation of a linguistic expression to be a general one. Formally, when the contextual factors are supplied to a linguistic expression Φ, the value of Φ with respect to those factors defines a distinct context. So I will extend the semantics of contexts by saying that given a set of context factors f, if a linguistic expression Φ is evaluated relative to a sequence σ, thus defining an $f(\sigma)$, then $f(\sigma)$ is a member of context σ. An index is annexed to the sequence of indices that form the context upon the assignment of a value to it in Fiengo and May's

system. Semantically, there is purely a pairing function between integers and discourse entities.[10] Similarly, for the context factors, upon assignment to a particular value, that factor is annexed to the sequence of symbols representing the context, irrespective of whether there is a syntactic correlate. Thus a particular sequence of context σ may go $\{1, 2, f_x, f_y\}$, representing assignments of entities to positions 1 and 2, as well as assignments factor x and factor y of context σ.

The discourse factors can be defined as functions. They operate like the relation ***Val*** in Fiengo and May's semantics, relative to a sequence. In my extension of the semantics of context, I retain the insight of Fiengo and May (1994) that the basic unit of a context is a sentence. Therefore, let Φ range over linguistic expressions of the syntactic type IP, relative to the context for Φ. Individual contexts will be designated with Greek letters. Below, there are two discourse factors defined that are relevant to understanding first and second person pronouns, Function O and Function P.

Function O: $f_O(E, \Phi, \beta)$ iff E is the origin of Φ in context β.

Function P: $f_P(F, \Phi, \beta)$ iff F is the presentee of Φ in context β.

These function statements are read as:
'E is the value of the f_O of Φ with respect to β and 'F is the value of the f_P of Φ with respect to β.'

An entity E is assigned the discourse role of *origin* of β(Φ) if E is intensionally

related to the expressive force of β (Φ). Expressive forces include truth-value commitments, performative commitments, expressive outbursts, and the like. For example, a speaker has the function origin of the sentences he composes. If he attributes a belief to an agent, then the agent has the function origin of the context composed by characterizing the belief. An entity F has the discourse role of *presentee* of β (Φ) if β (Φ) is presented to him. Expression β (Φ) is presented to F, for example, if β (Φ) is a question put to F, or β (Φ) is a request for F to comply with, or if β (Φ) is addressed to him. In indirect questions and imperatives like those seen in (1) and (2), the subject of the embedded sentence is the presentee of the context generated by the embedded clause.

(1) I asked Bill if [he were cold] (2) Halbert told her [PRO to sing]

Notice that these functions need not be mediated by reference.[11] That is, the functions takes us from contexts to actants, and an actant assigned to the role of origin or presentee with respect to a given context may or may not occur as a discourse entity in that context. These functions are part of what defines a context, in the present model.

Taking the functions discussed above, Function O and Function P, to be assignments on the discourse with respect to a given context β, the following two axioms illustrate the valuations that would be needed in order to formally define the relation between these functions and expressions that bear features that designate these assignments.

Val$(x, _{DP}[\text{ me}], \beta)$ iff $x = f_o(\beta)$

Val$(x, _{DP}[\text{ you}], \beta)$ iff $x = f_p(\beta)$

In the interest of providing as large a description of the semantics of these expression types as possible, I should point out that there is a less narrow use of the 2nd person pronoun. This usage, what I'll call the "universal you" occurs across many languages. For some English examples, observe the sentences in (3).

(3) You can never be too rich or too thin.

Getting rounded up by the Military Police will put the fear of God into you.

It is possible to interpret these sentences as being addressed to someone in particular, of course, but a highly salient reading is one in which the "you" refers to anyone, the speaker, the particular addressee of the sentences, or anyone at all. No one, in fact, seems to be excluded. This type of interpretation is generally best in sentences without a specific temporal interpretation. (4), for instance, is distinctly marginal on the "universal you" reading.

(4) ??$(\forall_{you})$ You were a beautiful baby (cf. humans are beautiful as babies)

However, given the right conditions, even very specific time indicators are no deterrent. (5) seems to me to be a perfect expression of a widely felt sentiment.

(5)
You weren't thinking about terrorists at all on that clear blue Tuesday morning in September 2001

What seems to be required is the intention of making a generality, something that holds not just of the local environment surrounding the speaker and her interlocutor, but whenever, wherever that speech act might be performed. The "you", in this way of looking at such statements, might be regarded as the universally available presentee. In order to accommodate this meaning of 2nd person pronouns, we need an axiom that allows an all-inclusive context. The axiom for specifically directed usage of "you" repeated below

$\boldsymbol{Val}(x, {}_{DP}[\text{ you}], \beta)$ iff $x = f_P(\beta)$

is reusable if we just replace the specific context "β" with a variable context. Given this generic character, "you" refers to anybody that can be the presentee of any context, which is the desired reading. The axiom for this non-specific presentee is as follows, where omega (ω) is meant to stand for any context.

$\boldsymbol{Val}(x, {}_{DP}[\text{ you}], \omega)$ iff $x = f_P(\omega)$

Certain properties of the environment appear to be the ones relevant to natural language semantics. These can be built into the discourse model as context factors. Each factor is "turned on" for a given context upon its assignment to the context. Contexts may vary with respect to the set of factors each require to be turned on, in order to be

valuated. The set of possible context factors should in principle be small. It is unlikely, for example, that there is a type of context which requires assignment with respect to the smells detectable in the environment of the utterance. Factors, such as the time or location of the utterance of Φ, however, seem to be germane for the complete identification of some contexts[12]. It is clear that there are contextual factors which are required to determine the value of certain linguistic expressions even in cases where the necessary contextual item is not a traditional predicate argument. In particular, if the linguistic expression is one whose valuation is a truth value, a temporal point is required for this assignment. Take the following sentence.

(6) Trevor is broadcasting vintage calypso tunes

One cannot say whether (6) is true or false without knowing the moment in time it is deployed. In terms of the present theory, the value of the linguistic expression

$[_{IP}$ Trevor is broadcasting vintage Calypso tunes]

is unassignable without the temporal factor of the context. So we can say of a linguistic expression whose value is a truth value that part of its context is the temporal factor, f_T. To build this factor into the expanded notion of context , the following function is provided.

Function T: $f_T(G, \Phi, \beta)$ iff G is the temporal anchor of Φ in context β.

The temporal anchor of a sentence (Φ) is established by the moment in time when Φ is deployed. In temporal semantics, temporal reference is calculated with respect to utterance time.[13] That is, given a particular piece of tense morphology with features of the type [+/– past], the moment in time referenced is a moment forward or backward in time with respect to the f_T of the utterance context, the utterance time. When the contextual factors, origin, presentee, location, and time $\{f_O, f_P, f_L, f_T\}$ are supplied to a linguistic expression Φ with context ***g***, ***g*** consists of a set of the assigned integers occurring in Φ, and Φ's factors f_O, f_P, f_L, f_T. So, for example, if t_1 is the f_T of Φ with respect to context ***g***, this assignment will be expressed as

$t_1 = g(f_T)$

This works analogous to the assignment statement used in Fiengo and May (1994) for referential expression that appear in a sentence Φ. The assignment of an entity to a position in the sequence of context ***g*** is expressed as a function of ***g*** in their semantics. Thus, if Lola is assigned to the 1st position of Φ with respect to context ***g***, this assignment is expressed as

Lola = g(1)

And if Max is the of f_o of Φ with respect to context ***g***, this assignment is expressed as

$Max = g(f_o)$

Since the context factors are all expressed as functions with respect to ***g***, the designation $g(f_x)$ is unique with respect to ***g***, just as the indices of ***g*** designate unique positions within its sequence.

Section 2.1 Queuing a Context: Utterance-driven

In order that these assignments be deployed as a matter of contextual assignment to the expressions in the context, however, the assignment will need to be part and parcel of the sequence assignment as well. We can think of contexts as having two parts: the syntactic representation, and the semantic valuation of that syntax, including the representation of the actants. For some situations, we will need to hold a bit of syntactic structure constant and ask whether it is valuated relative to this or that context. I will, in this connection, speak of the contexts as being ***queued***. When discourse factors are assigned to a sentence, a context for it is ***queued***. Queuing is the mechanism that generates a context, thereby inducing the mapping between syntactic content and semantic valuation. We can think of queuing as demarcating which bits of syntactic structure are open to assignment with respect to a particular context. Utterance contexts are queued by being uttered. As we will see later on, ascription contexts are queued somewhat differently. The environment from which the various types of discourse

assignments are drawn – the time, locale, persons and objects peopling it is what configures the context. I will refer to this local environment as the ***queuing environment***.

How do these relations configure syntactic representations? First of all, following the model in Fiengo and May (1994), the indices which are part of the syntactic representation of discourse entities are positions in a sequence set up by the context, where the assignment of individuals to sequence positions is relative to the sentence in which that sequence of indices occurs. This relativization limits the sequence to the positions that are represented in the sentence, i.e. the indices that occur. It also constrains the sequence assignments to the ones relevant to the sentence context. What happens when an actant of a context has a discourse role and is also referred to in that context? The model works as follows. As expressions enter the context, they are encoded with respect to how they fall into the discourse functions. So, in order to have referential assignments and factor assignments proceed in tandem, valuations on expressions which are assigned such functions will require a two-place relation. In this way, the valuation statement sets the licensing condition on discourse factors that are lexically introduced. Thus the above valuations are represented as below:

$\textit{Val}(x, {}_{DP}[\text{ me}]_j, \beta)$ iff $x = \beta(_{<j, \text{origin}>})$

$\textit{Val}(x, {}_{DP}[\text{you}]_k, \beta)$ iff $x = \beta(_{<k, \text{presentee}>})$

The first of the above statements insures that the feature "origin" is only licensed

if the entity in the j^{th} position = $\beta(f_O)$; the second that insures that the feature "presentee" is only licensed if the entity in the k^{th} position = $\beta(f_P)$. Thus, the above valuation statements are the licensing conditions for arguments bearing those features. To make my assumptions explicit, I assume that pronouns bearing first person or second person features are morphologically marked with the features "origin" and "presentee", respectively. Following R. Kayne (2003) and E. Benveniste (1966), I assume 1^{st} and 2^{nd} person pronouns have person features; 3^{rd} person pronouns do not. The former have the feature "ground", specified as *origin* and *presentee*. The latter, 3^{rd} person pronouns, have the feature "gender",which is mutually exclusive with "ground", specified as *masculine, feminine,* or *neuter.*

Indexed expressions which are not assigned a discourse role are unitary valuations. In Fiengo and May (1994), it was left open as to how a context is related to the discourse as a whole. I wish to specify the notion of context a bit more. In my terms, a discourse is made up of several contexts which share the sequence valuation of the individuals in the discourse domain. The assignment of a position in this sequence to a given individual is established by the first context in the discourse in which the indexical representation of that position appears. That is, in order for the convention of assigning individuals to positions in a sequence via indices to make sense, it is assumed that the sequencing is shared across all the contexts that make up a discourse. Two contexts, α and β may merge if they are in the same discourse[14] and no expression in α is assigned a different discourse function in β. This last definition allows multiple utterances by a speaker over the course of a conversation to be considered part of the same context,

allowing the addition of new referents into the context as it proceeds.

The reader will notice that discourse roles, being functions on the context, allow but a single role per context to be assigned to an index. This arrangement of assignments allows a context to fully individuate its actants in virtue of the unique value generated by the functions f_O and f_P. Lest the reader be tempted to conclude that expressions determined by these function need not be assigned indices, that the discourse role assignment would suffice, recall that this view would return us to the problem of explaining the difference between examples like (1) and (2) of Section 1, repeated below.

(1) Ég elska sjálfan mig

I love myself

(2) Ég elska mig

I love me

Since contexts assign discourse roles to DPs at a particular index in their sequence, it follows that in a given context, once an index is paired with a discourse role, each occurrence of that index in that context will have the same discourse role. Thus, in an ongoing discourse, an index may change its discourse role only under change of context. Further, since a context has but one f_O, two contexts with different f_O values can be distinguished from one another. Let us call such contexts ***distinct***.

Let us now turn to the issues surrounding the representation of expressions within

their contexts. Part of the syntactic representation of a DP is an index representing the referential assignment. At the point of valuation, this index may be paired with or not paired with a discourse role. An index is assigned globally to the discourse, but the discourse role is assigned local to the context that the DP occurs in. Once the context is queued, the particular discourse role is assigned with respect to each index in that context. Thus, in an on-going discourse, an expression at a particular index may cycle through differing discourse role assignments each time a new context is embedded into the discourse. Consider, for example, the valuations on the following discourse, starting with context α.

Context α

(7) $[\text{I'm}]_7$ leaving.

Context β

(8) $[\text{You're}]_7$ leaving?

Context γ

(9) $[\text{She's}]_7$ left.

In each context, α, β, and γ, the valuation of DP_7 will yield the same entity in virtue of the fact that all three contexts are contained within the same discourse, but it is differently treated with respect to discourse role assignment. The valuation of the

pronoun seen in (7) given below, gives us the interpretation that x is the value of DP_7 with respect to context α iff the entity in the 7th position of α's sequence assignment is the origin of α.

Val$(x, {}_{DP}[\ I]_7, \alpha\ )$ iff $x = \alpha(_{<7,\ origin>})$

Similarly, the valuation of the pronoun seen in (8) gives us the interpretation that x is the value of DP_7 with respect to context ß iff the entity in the 7th position of ß's sequence assignment is the presentee of ß.

Val$(x, {}_{DP}[\ you]_7, ß\ )$ iff $x = \beta(_{<7,\ presentee>})$

In (9), since there is no discourse role assignment to DP_7, the valuation tells us nothing more than what the sequence assignment tells us, that x is whoever is assigned to the 7th position of γ.

Val$(x, {}_{DP}[\ she]_7, \gamma\ )$ iff $x = \gamma(_7)$.

Notice that none of these contexts can merge with any of the others because the discourse roles for DP_7 differ across the three contexts. Under most circumstances, (7), (8) and (9) would be uttered by three different speakers. There would be therefore a different f_o value for each, thus contexts α, β and γ would be distinct. Under the unusual but certainly possible circumstances that (7) through (9) are uttered by the same speaker, their f_o values would be the same. Contexts α, β and γ would, in such circumstances, be indistinct.

An idea central to the model developed in Fiengo and May (1994) is that the sequence of indices in a sentence identifies their referents in virtue of that sequence being

relativized to the sentence. A sequence, in their sense, models the context. This contextualized sequence is to be contrasted with the notion of an arbitrary sequence of the type commonly used in the interpretation of logical terms. So, for example, there is a relationship between the set of lexical restrictions in a given sentence and the sequence such that non-logical terms like names restrict the sequence to their given assignment and no others. Even logical terms do not generate absolutely arbitrary sequences. They conform to lexical restrictions which limit the sequence; these in turn are contextualized. *Every dog* or *who* restrict the sequence to things that are dogs and things that are human, respectively. But in using either of these terms, a speaker is restricting the sequence further still to the dogs or humans relevant to the context when she says *"Every dog just has to piss on my gardenias."* or *"Who ran off with the barbeque?"* In these instances, we see that the lexical entries trigger both an engine of sequence generation and a restriction on the possible set of sequences. My additions to this model are lexically triggered axioms that introduce a subset of indexable expressions (viz, ground pronouns) into the context in specific ways. If some indexed expressions systematically restrict the context, a theoretical issue necessarily arises with respect to the general class of indexable expressions. It was observed that there is a split in the pronominal system, a pronoun that is not a ground pronoun bears a gender feature. Gender features are unlike ground features in that they are entirely lexical while the applicability of a ground pronoun depends on the contextual setting. Let us take this observation as a postulate, call it the Lexical Postulate.

Lexical Postulate

All indexed expressions are defined by the context (f_O or f_P) or are lexically restricted

With these apparatuses in place, the difference discussed above in the interpretive possibilities of non-coïndexation as seen (3) and (12) of Section 1 comes about for a representationally formal reason.

(3) Ég$_1$ elska mig$_2$

I love me

(12) Jón$_1$ elskar hann$_2$

Jón loves him

In both of these examples, we have single a discourse consisting of a single mono-clausal utterance. There is no reason, therefore, to suppose that either (3) or (12) queues more than a single context. In (3), both position 1 and position 2 enter Function O , in virtue of the morphological feature each bears but, since a context can have but one individual as an origin, the same individual is assigned to both positions. Co-reference is thereby forced, as a consequence of Function O , being a function, determining a unique value. The play between the forced co-reference of Function O and the forced co-reference of co-indexation is what brings about the inference process rehearsed above in the discussion surrounding (1) and (3) of Section 1.

The co-reference possibilities in (12) differ because the two expressions bear no ground features and thus fall into the non-role category, which is not restricted to a unitary assignment with respect to the individuals in the domain. Though it is possible for the same individual to be assigned to both positions 1 and position 2 , the relations defined by the context do not force this possibility. There will then be no mechanical relation between (12) and (10a) of Section 1.

(10a) Jón_1 elskar hann sjálfan$_1$

Jón loves himself

Given a special set of conversational premises, one might infer that the subject and object in (12) have the same referent, but this inference process would be of an entirely different character from the process involved in (3).

Section 2.2 Queuing a Context: Verb-driven

In Section 2.1, I discuss contexts where the context factors are introduced by extralinguistic environment of the sentence – the temporal and locational points, as well as the origin and presentee determined upon utterance. In this section, I consider the case where one context provides certain of the contextual factors for another. The syntactic description of this type of context determination is wherein an IP is embedded within an IP. That one context can determine the assignment of another is unsurprising in a certain sense, if we consider that speakers commonly finish each other's sentences. In the case of

embedded sentences where the speaker attributes a belief or desire, or like dispositional attitude to someone else, reference to that person in the matrix sentence (*e.g.* "Allison thinks that ...") provides assignment for the embedded context. What is needed in order to queue a context is a relation defined between these elements: an IP, and a set of context factors. With utterance contexts, this relation is determined by the speaking event; the speaker is related to the IP via the function f_O, the hearer is related to the IP via the function f_P, the instant of utterance is related to the IP via the function f_T, and so on. A verb can "turn on" a factor f_x of a context, if its lexical properties relate its arguments in a way that meets the criteria of f_x. That is, with verb-queued contexts, the verb must be able to provide a relation between an IP and an entity that meets the conditions for a context factor. For example "think" in the following sentence is a relation between a proposition and its agent, therefore between an IP and its origin.

(10) Uncle Albert thinks that we haven't done a bloody thing all day

Similarly, "inform" in a sentence like

(11) Rhett informed Scarlett that frankly, he didn't give a damn

is a relation between a sentence and both its agent and its recipient, therefore between and IP and it origin and presentee. Thus the two "person factors", f_O and f_P can be determined for embedded IPs by certain clause-selecting lexical heads. The argument structure of

such verbs derive the factor-to-context relation, thus the context is queued by lexical entailment.

There is a further point in how the formalisms of Section 2.1 interact with the larger grammar that needs bringing out. It is an obvious but important fact that it is the intentions of the speaker which determine the forms she will use in referring to the individuals in her discourse. Her conversational intentions dictate whether she uses, for instance, the first person or the third person in referring to herself. In the uni-context examples examined thus far, it is a straightforward matter to relate the speakers's intentions with the expression forms she uses. New questions certainly arise, however, when considering the semantics surrounding circumstances that involve characterizations of the intensions and saying of others. For an example, consider (12).

(12) Churchill wants you to give the Blood, Sweat and Tears speech.

Say (12) is uttered. A context for it is, therefore, queued. The valuation of the sequenced expressions can be represented as (13), where π is the context queued via utterance. I have only included the valuations of the referential expressions as the valuation of the rest of the material (the valuation of the verb 'give', etc) is not an issue to do with discourse role assignment.

Context π

(13) Churchill_5 wants you_6 to give the Blood, Sweat and Tears speech_4

Val$(x, {}_{DP}[\text{ Churchill}]_5, \pi)$ iff $x = \pi(5)$ and x=Churchill

Val(x, $_{DP}$[you]$_6$, π) iff x = π($_{<6, \text{presentee}>}$)

Val(x, $_{DP}$[the Blood Sweat and Tears speech]$_4$, π) iff x = π($_4$)

and x = the Blood Sweat and Tears speech

Suppose the context characterizing what Churchill wants (call it Context ψ) is also queued. This possibility raises a few questions. Let us start with the question of how the discourse roles of context ψ are determined. Now, in the cases where uttering a sentence queues its context, the real-world environment of that utterance determines the discourse role assignments. Here, we have the case where something in one context queues another. Real-world entities are, in utterance contexts, the assignees of f_o and f_p. In being uttered[15], a sentence is intrinsically related to its speaker, addressee, time and place at its inception. These relations are just part of the queuing environment of the sentence. The very performance is what sets up the relation between the speaker and the thing spoken, between the context and its origin. The theta-role assignments of certain verbs closely parallel this relation. In the place of the performance or utterance of a sentence queuing its context, we have a verb which queues the context. The lexical properties of the matrix clause are what determines the discourse roles of context ψ. That is, the relation between the two arguments of "want" entails that its first argument stands in the origin relation to the second. Discourse roles are assigned, in this case, not directly to real-world entities, but via the indices of the arguments in the queuing environment provided by the matrix arguments. The context factors are ultimately assigned to the real-world entities via the valuation sequence in which the arguments in the queuing

environment appear. The queuing environment for context ψ, then, consists of the verb *want* and a single argument [$_{DP}$ Churchill]. We are considering a relationship between this material and an assignment of discourse roles. It is therefore meet to look for a level of representation that spells out the relationship between *want* and its arguments, such that f_o is calculable from it. The valuation of [$_v$ want] triggers queuing context ψ. When *want* selects a sentential complement, we have the syntactic form [A wants B] whose semantic requirement is roughly that A wants B to hold true. The relationship of A to B fits the requirements of f_o. That is, the semantics of *want* dictate that in virtue of desire, [$_{DP}$ A] is related to [$_{IP}$ B] such that A is committed to the expressive force of B. Given this fit, we now have it that once context ψ is queued, these relations are assignable from the queuing environment:

[$_{DP}$ Churchill]$_5$ = $\psi(f_o)$

$\sim (\psi(f_o) \vee \psi(f_p)) = [_{DP}$ you]$_6$

$\sim (\psi(f_o) \vee \psi(f_p)) = [_{DP}$ the Blood Sweat and Tears speech] $_4$

The lexical properties of the queuing verb give us the first assignment above, *i.e.*, that Churchill is the origin of the desire. Its lexical properties make no other discourse function assignments; the second and third lines above are meant to indicate that the indexed expressions in the queued context are recipients of neither discourse function. Since DP_4 and DP_6 fall into neither Function O nor Function P, (21) represents the only

valuations possible for the queued context ψ.

Context ψ

(14) $[you]_6$ to give [the Blood Sweat and Tears speech]$_4$

Val(x, $_{DP}$[you]$_6$, ψ) iff x = ψ($_6$)

Val(x, $_{DP}$[the Blood Sweat and Tears speech]$_4$, ψ) iff x = ψ($_4$)

Given these discourse role determinations, we see that the valuation of DP_4 is the same for context ψ as it is for context π. The assignment is different for DP_6, however. In context π, where it is uttered, it is assigned the function ***presentee***, while its ascription assignment, context ψ, assigns it no function. In terms of its valuation in Context ψ, DP_6 behaves like a third person pronoun would; its indexical value is its only determinant. In utterance contexts, as we saw with examples (10) and (10a), pronouns with no discourse functions bear no ground feature. If both contexts π and ψ were utterance contexts, this difference in assignment would present a problem, since only one set of pronominal features could be uttered at a time. But when one context queues another, no such conflict arises. The question is, does having these two valuations express anything that is needed in order to interpret (12)?

Section 2.2.1 Non-pronominal Expressions in Verb-Queued Contexts: *De Dicto* Interpretation

In order to properly address this question, let us now consider queuing under context as a device available to the grammar. If every instance of sentence embedding were to trigger context-queuing, then expressions deeply embedded would have to be valuated multiple times. In a sentence like (15), for example, the expression [Daryl] would be valuated six times, and each would receive the same evaluation vis-a-vis discourse role and sequence valuation. The expression [*I*] would be valuated six times, as well, five identical.

(15)
Angela wondered if Cho-cho really said that you asked if Maraschino thought I should leave Daryl

Not only would each of the referential expressions have to be computed for each context queued, but the rest of the contents of each context would, too. It would be massively redundant to compute such valuations. Unless there were some expressive power gained by these multiple context-queuings, it would seem too cognitively costly. It is reasonable to suppose, instead, that an expression is assigned discourse role (or any other such contextual valuation) with respect to only one context. Of course, multiple instances of an expression with a particular index can occur in distinct contexts, as we saw in the miniature discourse in (7) - (9). What is needed is a restriction on token expressions. Let us call this the Unique Context Hypothesis. I purpose it as follows.

Unique Context Hypothesis

An expression token is assigned context-valuation with respect to one and only one context

So far, we have discussed only valuation features that are relevant to pronominal interpretation. There are cases, however, where having the context-queuing mechanism available to the grammar would give expressive power where it is needed for explaining certain interpretations that do not involve indexicals. A speaker may want to preserve the value of certain portions[16] of a context as some other speaker would express it. The *de dicto* cases revolve around differences in the interpretation of an expression, as held by the speaker as against the agent of a belief ascription. In a sentence like (16), if the expression [Clark Kent] were queued relative to the context which takes the belief agent, ***Ralph***, as its origin,

(16) Ralph believes that Clark Kent can't fly

then the valuation of [Clark Kent] in that context would be valuated independently of any assignment the speaker of the sentence might have for the expression. The conclusion that Ralph doesn't hold contradictory beliefs, even though he believes that Superman *can* fly, just in case for him, "Superman" and "Clark Kent" are not co-referent terms is intuitively the correct one. Interpreting (16) as true and non-aberrant in these circumstances is consistent with the idea that context-queuing is a mechanism of grammar. While the context representing the speaker's assignments would have the same entity occupying a particular position in the sequence of discourse entities, no matter were the expression

bearing that index "Superman" or "Clark Kent" , the same would not be true for Ralph. Separate positions would be required to accommodate separate entities, these assignments being properties of the context of which Ralph, not the speaker, is the origin. There are, of course, many other ways one could go about explaining such scenarios, but to be successful, they will have to touch directly on the form of the expression, relative to its interpretation. This is as good a device as any other for representing *de dicto* readings. To get a *de re* reading, no context-queuing is involved. To get a *de dicto* reading, the context containing the candidate expression would have to be queued in order to establish an assignment relative to it. The representation brought about by context-queuing is just what is needed for one of the two ways in which verbs of saying and verbs of believing can be read.

Section 2.2.2 Pronominal Expressions in Verb-Queued Contexts: PRO vs MMA

Pursuant to the above discussion, let us explore the possibility that context-queuing is a mechanism available for the purposes of representing a particular expression's interpretation relative to contexts other than those established by the speaker. Thus, an expression brought into a sequence via utterance would optionally be queued into a distinct context under context-queuing. Now the idea here is that this non-utterance queuing would be deployed to yield the *de se* readings that we saw to inhere with long-distance MMA. In the examination of this type of interpretation in Chapter One, it was seen that these readings are a property of individual arguments, rather than

the clause they are embedded in. Thus a sentence may have a mix of *de se* and *non de se* interpretations on a single referent. Some care must be taken with the context-queuing mechanism in order to accommodate these possibilities. As the examples in (17) through (19) show, bound occurrences of the ungrounded pronoun can co-occur with MMA of the same indexing. (Thráinsson, pc) These mixes can occur within the same clause, as well, as in (19)[17]

(17) Jón$_1$ sagði að Maria hefði sagt sér$_1$ að Pétur hataði hann$_1$

Jon said that Maria had told self that Peter hated him

(18) Jón$_1$ sagði að sig$_1$ minnti að Pétur hataði hann$_1$

Jon said that self seems-to-remember that P hated him

(19) Jón$_1$ segir að systir sín$_1$ hati hann$_1$

Jon says that sister self's hates him

I have set up contexts to be definitive only relative to an f_0 assignment and only relative to a syntactic representation. Given the UC Hypotheses, an expression within a phrase-marker representing the complement of the queuing verb could allow but a single context to determine its valuation. In the above cases, since the valuation axiom for MMA triggers context-queuing, they are open to valuation only with respect to the embedded context. The ungrounded pronouns are inert in this respect. They are part of the context which is queued, but their only assignment comes from what the utterance

context assigns; and these assignments are expressed in the features that they bear.

Context-queuing, as I have presented it, is a mechanism by which a particular aspect of an ascription context can be represented in accordance with the way the agent to whom the speaker ascribes that context to would evaluate it. As we saw in example (16), the expression [Clark Kent] would have to be evaluated according to the belief agent's (Ralph's) assignments. The rest of the expressions in the queued context { $_{VP}$[**can't fly**]} are not in need of any valuation distinct from that of the utterance context. So although the entire context (the phrase marker defined by the complement of the queuing verb) is queued, only one expression within that context would get an evaluation relative to it.

In example (12), there were two expressions in the verb-queued context. If we assume that once an expression is uttered[18], it is valuated with respect to the utterance context, then by the UC Hypothesis, they are both ineligible for valuation with respect to the queued context (context ψ). Even had this not been the case, notice that neither expression depends referentially on any expression in the queuing environment. Crucially, it is the queuing environment that determines the candidates for the discourse functions. This is on a parallel with utterance contexts; the relation of an utterance to the time, location, speaker and addressee is determinable because these properties exist independent of it. Temporal, locative and discourse role expressions are dependent on these extra-linguistic factors for their interpretation. Similarly, when a context is queued sentence-internally, these relations are defined outside of context itself . In the terms set forth here, the discourse functions are attributes assignable via the index of an expression

in the queuing environment. An expression which is inside the queued context, then, is interpreted as having a discourse function only where that index, that position in the sequence of entities of the discourse, has been assigned such a role *exterior* to the context. The capacity of an expression in a verb-queued context to be interpreted with either of the discourse functions rests in its dependency relation with an expression in the queuing environment.

In example (20), in contrast to (14), the relevant dependency is manifest.

(20) Churchill remembers giving the Blood Sweat and Tears speech

That is, such a dependency exists given standard assumptions of generative syntactic theory[19] that the subject of the non-tensed verb is a referentially dependent pronominal element whose phonological matrix is null. The representation under these assumptions is as in (21):

(21) Churchill_5 remembers [PRO_5 giving the Blood, Sweat and Tears speech]

In this example, as in the previous one, the queuing environment establishes the following assignment with respect to the queued context ψ:

$[_{DP}\ \text{Churchill}]_5 = \psi(f_o)$

Since (20) can in fact ***only*** be interpreted *de se*, as PRO has been argued to be generally[20], we have a good indication that not only is the embedded subject a licit receptor of the assignment ***origin***, there is no other assignment possibility for it. This piece of interpretation data forces a theoretical decision. There are two questions that arise. Firstly, what forces the coïndexation between PRO and the matrix subject. Secondly, what accounts for the *de se* interpretation of PRO. Let us call the choices Binding Theory + PRO Theorem and Binding Theory + Queuing Theory. In the former, binding is forced by Binding Theory, in the latter it is forced by the assignment to PRO, ultimately by Queuing Theory.

The Binding Theory + PRO Theorem choice would say that

I **Binding**

PRO is obligatorily co-indexed to an argument in the clause just above it because PRO is a pronominal anaphor

II **Interpretation**

Why it is interpreted *de se* requires a *de se* Theory

III **Configuration**

Which argument it is coïndexed with requires a Control Theory

Binding Theory + Queuing Theory would have it that

I **Binding**

PRO is a pronoun, free in its binding domain

II **Interpretation**

PRO requires contextual assignment by the Lexical Postulate - no lexical content

III **Configuration**

Queuing Theory = Control Theory:

Verbs that queue contexts supply the contextual determinants (f_o and f_P) from the queuing environment

Certainly, it would simplify Binding Theory to treat PRO as a pronoun, as opposed to the hybrid pronominal anaphor creature it assumes under the PRO Theorem. This would allow a unified view of PRO, whether it occurs in a context like (21) or as in (22) or (23), sentences which cannot even be distributionally accounted for by the Binding Theory + PRO theorem, since they are not bound.[21]

(22)
There is no way PRO to give the Blood Sweat and Tears speech without a good deal of gravitas

(23) PRO giving the Blood, Sweat and Tears speech should have been a piece of cake

In (21) PRO is obligatorily assigned the discourse function ***origin*** with respect to the queued context, and this assignment is what enforces co-indexation with an expression in the queuing environment and yields the *de se* reading as well. In contrast to (21), the instances of PRO in (22) and (23) have arbitrary reference. On the view that PRO may be free or bound like any phonologically expressed pronominal, the instance of PRO in (21), like those in (22) and (23) could occur free from binding. Following the same line of argumentation, something other than Binding Theory would be needed to rule out a

representation such as (24).

(24)* Churchill$_5$ remembers [PRO$_8$ giving the Blood, Sweat and Tears speech]

The theoretical dilemma, as I set it above, places the onus of explanation on the discourse function assignment to PRO. On the assumption that PRO in (24) bears the function ***origin*** in the queued context, (25) would be the valuation.

(25) Context π

Churchill$_5$ remembers [PRO$_8$ giving the Blood, Sweat and Tears speech]

Val(x, $_{DP}$[Churchill]$_5$, π) iff x = $\pi(_5)$ and x=Churchill

Val(x, $_{DP}$[PRO]$_8$,π) iff x = $\pi(_8)$

Val(x, $_{DP}$[the Blood Sweat and Tears speech]$_4$, π) iff x = $\pi[_{DP}\ ]_4$

and x = the Blood Sweat and Tears speech

Context ψ

$[_{DP}$ Churchill]$_5$ = $\psi(f_o)$

[[PRO]$_8$ giving [the Blood Sweat and Tears speech]$_4$]

Val(x, $_{DP}$[PRO]$_8$, ψ) iff x = $\psi(_{<8,\ origin>})$

In the utterance context, context π, PRO has no discourse function assignment, but in

the context queued by the verb remember, PRO has the assignment ***origin***. Now, discourse functions, as I have set them up, are determinable solely with respect to the environment from which they are queued. I direct the reader's attention to the first line showing Context ψ attributes. Since the queuing environment identifies an actant in the 5th position (Churchill) of the sequence of discourse entities, but none in the 8th position, the valuation in the last line of (25) is illicit; it cannot be discharged. In a representation just like (24) except that PRO is co-indexed with the actant which the queuing verb sets as the origin, we get both a referential value for PRO and its *de se* reading.

In view of sentences where PRO takes the so-called arbitrary reference, like (22) and (23) as well as a sentence like (26), where PRO is arguably assigned the discourse function ***presentee***, the discourse function assignment to PRO cannot be viewed as unvariably ***origin***, as neither indeed can PRO be said to be invariably *de se*.

(26) Churchill_5 told Chamberlain_7 [PRO_7 to give the Blood Sweat and Tears speech]

It is in keeping with the Queuing Theory view of the treatment of PRO that its discourse assignment be entirely a matter of the lexical properties of the verb that determines its queuing environment. This conclusion has to be drawn in any case, even for the Binding Theory + PRO Theorem choice. The lexical properties of remember differ from those of tell with respect to how the remembered or told contexts are directed, whether origin-directed or presentee-directed, and yet again from predicates like those in (22) and (23). In arguing for the Binding Theory + Queuing Theory, I invoked the Lexical Postulate

(repeated below) to account for the interpretation of PRO.

Lexical Postulate

All indexed expressions are defined by the context (f_O or f_P) or are lexically restricted

We have interpretive data from subject-controlled PRO demonstrating that it is sometimes assigned ***origin***. And we have data from instances of unbound PRO that it is sometimes given arbitrary reference. In these cases, the context assignment given is of exactly the same interpretive character as the "universal you" interpretations of overt second person pronouns.[22] This would be to say that ***presentee*** has been assigned to those instances of PRO, and thus they too conform to the Lexical Postulate. In object-controlled PRO sentences like (26) which suggest a concealed imperative in the infinitive, it is an attractive solution to claim that these are instances where the queuing verb gives a ***presentee*** assignment to PRO. The lexical properties of such verbs dictate that f_P be present in the queued context; that this context factor is "turned on", while the factor f_O is turned off. The idea is a little less compelling when we move from verbs like tell, convince, ask, and order to a verb like force. On the other hand, there seems to be nothing to rule this possibility out. Fortunately, there is morphological evidence showing first and second person assignments in these environments to support the claim underwriting the Lexical Postulate that phonologically null arguments[23] are necessarily given contextual assignments. This is data from Kannada. It will be presented by and by, in Section 2.3.1.

The question left open is exactly how is it determined which assignment a given instance of a phonologically null argument will get? There are two kinds of cases: where the context is queued, and where it is not. In cases where the infinitive clause is not queued, we get the 'universal you' reading. This is the most inclusive of all readings, applicable in absence of anything which would restrict the choice. Supplied with a theory of possible restricting elements, a Gricean approach would predict the less exclusive interpretation to be the one intended only where the speaker does not choose a structure which triggers the restricting factor. One part of the needed theory of restricting elements, then, is whether there is a verb which queues the clause containing the null argument or not. This is just a matter of subcategorization. The non-finite clauses that are not subcategorized for, such as those seen in (22) and (23) are not queued with respect to any particular context. The only assignment available then is the most inclusive, the 'universal-you'. In cases where the context is queued, where the non-finite clause is subcategorized for, the 'universal you' reading is excluded because a particular assignment is provided by the verb. There are two ways a theory could accomplish the control options. One way would be to say that when the subject binds PRO, it is assigned ***origin***, and when the object binds PRO, it is assigned ***presentee***. Of course, this approach leaves open why the PRO is so-bound. The other approach would be to say that when there is a matrix object present, the role ***presentee*** must be discharged, that is the queued context must have the factor f_P on. Otherwise, it is ***origin*** which must be discharged; the queued context in this case will have the factor f_O on and the factor f_P off. This approach is more in keeping with the spirit of Queuing Theory as it has been developed thus far,

but it is not entailed. It has the advantages of not requiring any further explanation for the binding facts, however. The binding of a PRO which has been assigned one of the roles is determined by the relation between the queuing environment and the queued context, as was shown in example (25) For both of the suggested ways of answering the question, matrix indirect objects have no effect. Thus verbs like promise and threaten count as either subject-binders or ***origin***-assigners because although there is a non-subject argument in the matrix clause, it is not an object, but an indirect object.

On countenancing discourse functional assignments as rehearsed above, the question remains – is there anything special at all about PRO? That is, are other pronouns equally good candidates for such assignments? Apparently, they are not. Consider the contrast in (27) and (28), which can be taken as a minimal pair once one gives up trying to define a binding domain that would distinguish them as the PRO Theorem stance would need to do.

(27) [Only Churchill]$_5$ remembers[[PRO]$_5$ giving the Blood, Sweat and Tears speech]

(28) [Only Churchill]$_5$ remembers[[his]$_5$ giving the Blood, Sweat and Tears speech]

This contrast, as was first pointed out in Fodor (1975), demonstrates a robust *de se/non de se* contrast. As was discussed in Chapter One, the first is true and the second is false, inasmuch as Churchill is the only one who can have a *de se* remembrance of the giving of that speech, while a large population living in the England of 1940 remember his performance. In terms of the issue surrounding non-utterance context representation, the

fact that (28) is false means that the overt pronoun, unlike PRO, resists taking on a discourse function in the queued context. The same contrast exists with overt pronouns that have utterance context discourse functions. Consider the following two pairs.

(29) [Only I]$_2$ remember[[PRO]$_2$ wobbling home at midnight]

(30) [Only I]$_2$ remember[[my]$_2$ wobbling home at midnight]

(31) [Only you]$_4$ remember[[PRO]$_4$ wobbling home at midnight]

(32) [Only you]$_4$ remember[[your]$_4$ wobbling home at midnight]

On a given night of wobbling, should I remember the experience, I might be the only one to remember it, if say everyone else who wobbled home after midnight can't remember doing so. Sentence (29) would express that *de se* remembrance. My neighbors would indignantly declare (30) to be false in the same circumstances however, given a sufficiently noisy return on my part. The same contrast would hold for you as protagonist of this little anecdote. Given the resistance of the overt pronouns of both the ground type and the gender-bearing type to taking discourse function assignments over and above the utterance context assignments, we can take this as more confirmation of the UC Hypothesis repeated below.

Unique Context Hypothesis

An expression token is assigned context-valuation with respect to one and only one context

The capacity for non-utterance context assignments is a property of arguments that are unassigned for any feature with respect to the utterance context. This is precisely the import of the Unique Context Hypothesis: an argument which is already assigned with respect to one context is inert with respect to any other context. Conversely, arguments that have no assignment in the utterance context are available for assignment in another. It is exactly this lack of assignment which makes arguments with no phonological matrices ideal candidates for non-utterance context assignments. Given the Lexical Postulate, these arguments require assignment from elsewhere.

Arguments with absolutely no phonological matrices occur very commonly in language, albeit in restricted grammatical environments, such as subject position of non-tensed clauses. Languages that have MMA are somewhat less common. These expressions, in having limited phonological material also appear to be ideally suited for *de se* representation. The *de se/non de se* contrast between (27) and (28) (and the other two pairs) might be considered to be the result of the phonological (or perhaps case) distinction that exists between the overt versus the non-overt subject of the embedded verb. However, such contrasts are also found between overt expressions with the same case. Consider, for example, the following pair:

(33) Hver einasti sjúklingur$_1$ telur að Maria hafi svikið sig$_1$

Each and every patient believes that Maria has^{SBJ} betrayed self

(34) Hver einasti sjúklingur$_1$ telur að Maria hafi svikið hann$_1$

Each and every patient believes that Maria has^{SBJ} betrayed him

Whether the form "sig" that appears in (33) is classed as a pronoun or as a reflexive, it is licit as a co-indexed form in the above structure. In the context of quantified antecedents, co-indexation is virtually assured in both sentences. Given, the lesson of the (27) - (32) examples, viz, that arguments which are unassigned with respect to the utterance context are open to non-utterance context assignment, we should expect one member of the pair sig/hann to be unassigned with respect to the utterance.

In what does the contrast between them consist? All the situations which would make (33) true are situations in which (34) is true, but the reverse does not hold. That is, (33) has an entailment which (34) does not. A speaker wishing to avoid committing to that entailment would, therefore use (34), whilst a speaker wishing to assert it would use (33). The entailment (33) has and (34) lacks is that each patient is aware that the person he believes Mary to have betrayed is himself. This state of belief is sometimes described as one in which the agent would be disposed to describe his belief using a first person pronoun. For the example, this would mean that each patient would be disposed to say "Maria hefi svikið mig" (Maria has betrayed me). A belief ascription of this sort, wherein the speaker commits to the claim that the believer is the agent of this sort of belief is the by-now familiar *de se* belief ascription.

Whatever the formal description of the special entailment of (33) turns out to be, why should it be that (33) rather than (34) invokes it? In keeping with the general line of

argument that MMA should fall into the same class as 1st and 2nd person pronouns, what had been called ***ground*** pronouns in the preliminary discussion, the claim would be that it is also assigned a discourse role, that of ***origin***. Since we have two contexts, the utterance context and the belief context, and the latter can be queued by the former, ***sig*** will be assigned a discourse role in the non-utterance context. Given the UC Hypothesis, it cannot receive any discourse assignment in any other context. (35) illustrates. For concreteness sake, let us say that Bert Lahr is the speaker of (33), and for simplicity's sake, let us take just one instance of the individuals patients, Sigga

(35) Utterance Context π[24]

Bert Lahr = $\pi(f_0)$

Hver einasti sjúklingur$_1$ [e$_1$ telur að María$_6$ hafi svikið sig$_1$]

Val(x, $_{DP}$[e]$_1$,π) iff x = $\pi(_1)$ and x = Sigga

Val(x, $_{DP}$[María]$_6$,π) iff x = $\pi(_6)$ and x = María

There are two instances of DP$_1$ in Context π. **[sig]$_1$** is valuated exactly as the first with no discourse roles assigned to it:

Val(x, $_{DP}$[sig]$_1$, π) iff x = $\pi(_1)$

We are taking the consistently uniform *de se* interpretation of sig as evidence that it is

always assigned the discourse role ***origin*** in a non-utterance context. It follows from the UC Hypothesis that there is no way to assign the discourse role ***origin*** (or indeed any role) to $\mathbf{[sig]_1}$ in context π. If the verb "telur" (believes) is read as queuing its context, assignments are available to any of the expressions within that context.[25] The representation of (33) with both contexts queued would be (36).

(36) Context π

Bert Lahr = $\pi(f_0)$

Hver einasti sjúklingur$_1$ telur að Maria$_6$ hafi svikið sig$_1$

Val$(x, {}_{DP}[\ e]_1, \pi\ )$ iff $x = \pi(_1)$ and x = Sigga

Val$(x, {}_{DP}[\text{Maria }]_6, \pi\ )$ iff $x = \pi(_6)$ and x = Maria

Val$(x, {}_{DP}[\ sig]_1, \delta\ )$ iff $x = \pi(_1)$

Context ψ

$[\text{Sigga}]_1 = \psi(f_0)$

Maria$_6$ hafi svikið sig$_1$

Val$(x, {}_{DP}[\ sig]_1, \psi)$ iff $x = \psi(_{<1,\ origin>})$

It is only in the context-queued context, ψ, that $\mathbf{sig_1}$ is assigned the discourse role ***origin***. This I have proposed to be part of what is read off its morphological make-up. As an uttered form, by the hypothesis originating in the above discussion of PRO, it is assigned no discourse role. But something more than just the assignment of ***origin*** is

needed. Otherwise (37) would be fine, where Bert Lahr is assigned to the 8th position in the utterance context.

(37) * Sigga_1 telur að Maria hafi svikið sig_8

Sigga believes that Maria has^{SBJ} betrayed self

Even were the matrix verb to queue the embedded context, (37) would not be grammatical. It is clear that it cannot mean what (38) does, as spoken by Bert Lahr.

(38) Sigga_1 telur að Maria hafi svikið mig_8

Sigga believes that Maria has^{SBJ} betrayed me

If MMA is rightfully classed as a member of the same class as 1st and 2nd person pronouns, it is in the same class as other indexicals such as "here/there" and "now/then". Each of these pairs is comprised of an indexical whose value is calculable locally in time or space and one which is non-local, calculable relative to what is local. To know what "then" indicates, one has to know first what is "now". Similarly for the spatial pair. The first of the pair in both cases is more simply evaluated, while the second requires another pass. The evaluation of "here" and "now" is tied to the locale of the utterance, the first spatially, the second temporally. These terms are grounded by the utterance they occur in by virtue of the location and the time that the uttering event necessarily establishes.

The notion of context as I have set it up here, closely following its conception in

Fiengo and May (1994), relies on the utterance as the engine for seating the linguistic expressions into an evaluation. I further enriched this notion with the utterance functions that yield the speaker and addressee. Standard analyses[26] of temporal expressions, including tense morphology make use of utterance time as the primitive needed for doing temporal semantics If one were to continue with the present notion of context and construct a semantics for temporal and locative interpretations, the utterance would be the bases for those assignments, as well. A context would need at least the triplet <utterer, utterance time, utterance place>. The expression "now" could be evaluated relative to the context in much the same way as the expression "me" is. If ***i*** is an instant of time, then $[\text{now}]_i$ in context π is licit just in case context π sets ***i*** = time of utterance. In order to express the value of "then", we would need to refer to *another* context exactly like π except in what it assigns to ***i***, such that its assignment is previous to ***i***. The intricacies of how notions like "previous to" are represented is not germaine to our interests here, but taking the make-up of an indexical to trigger evaluations relative to both the utterance context and another context is.

The idea is that MMA is to 1st person what "then" is to "now". As such, its valuation statement will require reference to the utterance context and some other context relativized to it. The valuation of an MMA, ${}_{DP}[\ \text{sig}]_k$ in utterance context π is as follows:

(39)
Val$(x, [_{DP}\ \text{sig}]_{<k,\ origin>}, \gamma)$ iff for some context γ introduced in π, ***Val***$(x, DP_k, \pi$ and $\gamma(f_o))$

Given this valuation requirement, MMA will always require both the utterance context (π) and another context(γ) in order to be valuated. The identity of x, the actant in the k^{th} position of π's sequence, is a determinant of π; the role *origin* assigned to that actant is a function of γ, the context introduced by π. The actant that is set equal to $\mathbf{f}_0$ will have to be available in the queuing environment. The only way to discharge the value of x in (39) is by way of the context π, the utterance context, because it is only with respect to π that a value is assigned to the k^{th} position. The contexts that are brought into play in context-queuing are dependent on the larger context for their discourse role assignment. As a result of this dependency, the valuation of MMA will always be dependent on the relationship between the verb that queues the context it is a part of, and the argument to which that verb assigns $\mathbf{f}_0$. This is to say that the source of the dependency relation of an MMA to its antecedent is due, not to the "referential deficiency" of anaphora or its lack of morphological specificity, as has been suggested by Reinhart and Reuland (1993) among many others[27], but to the context-relative assignment inherent to the valuation of MMA .

In the next chapter, I discuss the merits and problems of various theories that rely on the notion of referential deficiency to motivate a movement theory of MMA. For now, note that the present theory is not a movement theory, and that the mechanism that it relies on for achieving the long-distance dependency, namely context-queuing, is independently motivated. That is, the same mechanism can explain the semantically related phenomena of *de dicto* readings, although there is no morphological property required of the particular embedded argument that is responsible for its *de dicto* interpretation. The "deficient reference" motivation for movement is not, as far as I am

aware, proposed for any other type of movement. Thus, the place each of these mechanisms (Queueing versus Movement) occupy in their respective theories is pretty different.

The behavior of MMA and PRO have certain similarities and certain dissimilarities as well. The way in which they are similar contrasts with unground pronouns, those that are marked for gender in the languages being explored here. Before turning to the consequences of that contrast, MMA and PRO will be compared and contrasted for various properties.

(40) **Similarities between MMA and PRO**

i. Neither have morphological gender

ii. Both have non-utterance context assignments

It is clear that PRO has no morphological features at all, and that the MMA has no morphological gender features. I have argued that although the MMA has a morphological feature assignment, it is an assignment available only in non-utterance contexts. The Lexical Postulate determines that an expression with no lexical restriction will be defined by the context.

Lexical Postulate

All indexed expressions are defined by the context (f_O or f_P) or are lexically restricted

Third person expressions are always lexically restricted; pronouns minimally so[28], in that third person pronouns are inflected for gender. MMA and PRO, having not even the minimal lexical restriction, gender, are perforce context assignees. Thus (40)(i) predicts (40)(ii). The utterance context representation of PRO, in terms of features is $[_{DP}\ \varnothing]$. The utterance context representation of MMA is just an underspecified ground feature: $[_{DP} \propto \text{ground}]$.

(41) **Differences between MMA and PRO**

i. PRO can be assigned ***origin***, ***presentee*** or arbitrary; MMA can only be assigned ***origin***

ii. PRO can have an antecedent of 1st 2nd or 3rd person; MMA can have only 3rd person

iii. PRO occurs only in non-finite clauses; MMA occurs in non-finite and subjunctive clauses

iv. PRO is bound from one clause up. There is no bounding clause limitation on MMA

v. When PRO is not bound, it is arbitrary; when MMA is not bound it is logophoric

Sig is a member of the lexicon, thus it has a lexical axiom; ***origin*** is specified in the lexical axiom seen in (39), which thus restricts its assignment In contrast, PRO is simply an unspecified type of pronoun, not a member of the lexicon. Thus either contextual role is allowed. It will be recalled that the assignment of ***presentee*** yields both the 'universal you' reading, which is responsible for the arbitrary interpretation, as well as the contextually directed ***presentee*** seen in object-control sentences. ***origin*** is an equally valid assignment, providing it is bound by an f_0 argument. As for the differences in

antecedent possibilities, consider the fact that sig, in virtue of being member of the utterance context has some morphology, the feature [∝ ground], meaning that with respect to the utterance context, it has the feature [+ ground], but that it is unspecified as either ***origin*** or ***presentee***. The only antecedent compatible with an unspecified ground feature is 3rd person, because 3rd person expressions have no ground feature either. This is because they are specified for gender. PRO is not a member of the utterance context, so it has neither pluses nor minuses for any values in the utterance context. It is, therefore compatible with antecedents of any person-feature.

The distinctions in the distributional properties of these two referential creatures is explicable to some extent in terms of form. The only way for an expression to be totally featureless, as PRO is, is for it to have no case requirements. There seems to be but one argument position that has this property: subject of a tenseless (or perhaps more relevantly, one without agreement) clause. PRO, but not sig is licit in this position. The locality of the domain in which a controlled PRO appears was argued to be a matter of the lexical properties of the verb that queues the infinitive clause. The licensing requirement on the MMA, on the other hand, is merely co-indexation with an f_0 argument. Both of these elements occur in clauses that can be characterized as [-indicative]. This property is explored in some detail later with respect to the queuing mechanism. I defer argumentation on this point until that discussion. The difference in (41)(v) is also part of a later discussion.

Section 2.3 *De Se* Versus *Non De Se* Interpretations of Pronominals

The status of *de se* pronouns as against pronouns interpreted *non de se* is discussed in this section. Further elaboration and examples showing the behavior of MMA as an exemplar of the dedicated *de se* pronoun is provided here. It is claimed that grammar contains no dedicated *non de se* pronouns, that these interpretations are the result of implicatures that arise when a speaker fails to use a structure containing a *de se* pronoun.

The ground/unground split in the pronominal system I have proposed for the pronominal system seen in Icelandic and many other languages has led me to postulate a generalized valuation axiom for MMA (39). This postulate has predictive consequences of both interpretive and distributional import. The valuation for the ungrounded pronoun, seen in (42), imposes neither discourse function assignments, nor relations with an alternate context.

(42) ***Val***(x, $_{DP}$[hann]$_j$, π) iff x = π(j)

In order to evaluate the theory of the two types of mono-morphemes, given the addition of these valuation statements, it will be necessary to present data bearing on the conditions under which a sentence with an occurrence of MMA would be true in contrast to the truth conditions in the relevant sentence with a bound occurrence of an ungrounded mono-morpheme.

The truth value of (43) differs from that of (44) in certain circumstances.

(43) $Jón_1$ telur að $María_2$ hafi svikið sig_1

Jón believes that Maria has^{SBJ} betrayed self

In a situation such as the following, (43) would be false. Jón reads a story in the newspaper in which María betrays someone. Upon finishing the article, he forms the belief that the person about whom the article was written was indeed betrayed by Maria. However, he does not know that the article is about himself. He would not report "Ég tel að Maria hafi svikið mig" (I believe that Maria has betrayed me). In this case then, someone who is describing the belief which Jón formed after reading the article could not truthfully use (43), because Jón would report "Ég tel að Maria hafi svikið hann". (44), however, would be true in the above situation:

(44) $Jón_1$ telur að $María_2$ hafi svikið $hann_1$

Jon believes that Maria has^{SBJ} betrayed him

That is, in the circumstances described, when referring to himself, Jón would use a pronoun identical to that used by the speaker of (44). Interestingly, (44) can be interpreted as *non de se* or as *de se*.[29] The truth of (43) depends on the particular form of the belief which the agent of the reported belief holds, while the conditions for the truth of (44) are silent in this respect. Given the UC Hypothesis, this is unsurprising because once the expression hann is valuated in the utterance context, there is no valuation left to be done for any other context. Thus any possible assignment with respect to the embedded

context is inferable, it's just that none are delivered by that context. In contrast, there is a specific delivered assignment to the expression sig. The axiom in (46), which assigns what amounts to 1st person characteristics to MMA, yields the desired interpretation for (50).

Note that (45), which is just the conjunction of (43) and (44), would constitute a formal contradiction, were (43) and (44) not distinct in some semantically significant sense:

(45) Jón_1 telur að María_2 hafi svikið hann_1 en hann_1 telur ekki aðMaría_2 hafisvikið sig_1

Jón believes that Marai has^{SBJ} betrayed him but he believes not that Maria has^{SBJ} betrayed self

(45) is non-contradictory in that it is an assertion that Jón believes that Maria betrayed him but he fails to have a belief that he would characterize as "Maria hafi svikið mig". The nature of the two arguments above should be clear. On the assumption that distinct interpretations are generated from distinct representations, these arguments are put forth toward the claim that the representations differ in some representationally definitive way. The distinction is the difference in the type of valuation required for MMA, namely (39) and that required for ungrounded pronouns. MMA, like the other grounded pronouns is valuated via a two-place relation established by the context, while ungrounded pronouns receive but a unitary assignment, tied only to the sequence assignment in its context.

This pattern of divergent interpretations should be familiar from Chapter One, Section 2; with structures that permit contrast in form, the use of one of the forms, in this

case sig, commits the speaker to specifying a particular form for that argument in the agent's belief. This specification, I argue, is what yields the *de se* interpretation of that pronoun. The consistently *de se* interpretation of MMA is a direct result of its valuation assignment. The use of the contrasting form, the pronoun hann here, does not commit the speaker to this specification. Representationally, (43) and (44) are identical with respect to the utterance context assignments; (43) provides additional information in that it includes the ascription context assignment to the expression in the subordinate clause bearing the index 1. Given the fact that (44) is compatible with the scenario necessary for the pronoun being interpreted *de se*, it is worth considering what would provide a reason for a speaker to use a form which does not carry this commitment. The amnesia case is not compatible with the pronoun being interpreted *de se* – the speaker knows that the agent would not use the first person form. This is one type of reason. The other reason which **is** compatible with the pronoun being interpreted *de se*, is where the speaker does not know one way or the other whether the agent would use the first person form. In such a circumstance, using a sentence which does not include the ascription context assignment to DP_1, (44), commits the speaker to what she knows and no more. The relationship between (43) and (44), and in general such minimal pairs, would be mysterious without a theory of use, such as Grice's[30]. Presumably the Gricean maxim of quantity would dictate that the speaker not say more than she knows vis-a-vis the forms arguments would take in the agent's declaration of belief. Here, the *de se* interpretation requires an inference not given by (44) alone. An analogous situation might be where a speaker says "*I broke a colored window.*" There is no reason to conclude from this

sentence that the speaker broke a blue window. However, the sentence is compatible with that situation and an inference to that conclusion is warranted, for instance, in a region where typically glass is either transparent or it is blue. The tacit assumption is that colored glass is blue glass. The tacit assumption that warrants an inference allowing the pronoun in (44) to be interpreted *de se* is that typically people refer to themselves in the first person. That the *de se* interpretation of hann relies on this assumption rather than a semantically determinate representation is demonstrated by the fact that it is cancelable as in (44).

It is worth noting that whatever explains the truth conditions associated with the amnesia examples cannot be put down to the possibility that the reference of the pronoun in (44) must be referentially independent of the antecedent in order for the *non de se* interpretation to go through. This can be demonstrated by examining quantified sentences analogous to (43) and (44), given the same ignorance scenario. That is, (46) would be false in these circumstances, just as (43) would be, and (47), like (44) would be true whether it were interpreted *de se* or *non de se*.

(46) Hver einasti sjúklingur$_1$ telur að Maria hafi svikið sig$_1$

Each and every patient believes that Maria has^{SBJ} betrayed self

(47) Hver einasti sjúklingur$_1$ telur að Maria hafi svikið hann$_1$

Each and every patient believes that Maria has^{SBJ} betrayed him

The point simply being that placing the pronoun in a bound variable structure fails to exclude either the *de se* or the *non de se* reading. The difference between (39), the valuation axiom for MMA, and (42), the valuation axiom for a ungrounded pronoun like hann, does make the requisite distinction.

(39)
Val(x, $[_{DP}$ sig$]_{<k, origin>}$, γ) iff for some context γ introduced in π, ***Val***(x, DP_k,π and $\gamma(f_o)$)

(42) ***Val***(x, $_{DP}$[hann$]_j$, π) iff x = π(j)

The valuation of (46) is as was shown in (36), repeated below:

(36) Context π

$f_o(\pi)$ = Bert Lahr

Hver einasti sjúklingur$_1$ telur að Maria$_6$ hafi svikið sig$_1$

Val(x, $_{DP}$[e$]_1$,π) iff x = $\pi(_1)$ and x = Sigga

Val(x, $_{DP}$[Maria $]_6$,π) iff x = $\pi(_6)$ and x = Maria

Val(x, $_{DP}$[sig$]_1$,δ) iff x = $\pi(_1)$

Context ψ

$f_o(\psi)$ = [Sigga]$_1$

Maria$_6$ hafi svikið sig$_1$

Val(x, $_{DP}$[sig$]_1$, ψ) iff x = $\psi(_{<1, origin>})$

The valuation of (47) is seen in (48):

(48) Context π

$f_0(\pi)$ = Bert Lahr

Hver einasti sjúklingur$_1$ telur að Maria$_6$ hafi svikið hann$_1$

Val(x, $_{DP}$[e]$_1$,π) iff x = π($_1$) and x = Sigga

Val(x, $_{DP}$[Maria]$_6$,π) iff x = π($_6$) and x = Maria

Val(x, $_{DP}$[hann]$_1$,π) iff x = π($_1$)

(39) explicitly places the function f_0 in the valuation of MMA, an assignment which in utterance contexts is consistent only with first person morphology for the expression. This function is assigned to the MMA in a context that is relativized to the utterance context. (39) tells us nothing about the utterance context assignment to MMA. The UC Hypothesis supposes that there **is** no utterance context assignment to MMA. Given this morphological state of affairs, it will be compatible only with third-person antecedents, those arguments which have no discourse function assignments. This is not the same thing as claiming that in the utterance context MMA are third person pronouns. The premise is that MMA have no interpretation in the utterance context, therefore if there is no other context with respect to which it is valuated, it goes uninterpreted. An element interpreted with respect to no context at all crashes the derivation it occurs within.

Section 2.3.1 Evidence From Agreement Patterns in Kannada

In Icelandic and other Indo-European languages that have MMA, first and second person arguments are not found as MMA antecedents, but this fact does not directly show us anything about whether or how the MMA itself is represented in the utterance context. A way to test whether MMA has an utterance context valuation would be to observe its behavior in verbal agreement environments. Subject arguments in the nominative case appear as part of an agreement configuration, and so we should expect the ϕ-features appearing on the verb to reflect the person, number and gender assignments of the nominative argument. If agreement is a process that is consulted in conjunction with the feature-checking determined by the utterance context assignment, we should expect a conflict for a nominative MMA, given our premise that MMA are unassigned with respect to the utterance context. The agreement features will have no features from the nominative argument to check against. If, on the other hand, agreement can consult the features checked via a non-utterance context assignment, a determinant feature set can be checked, so no conflict should result. Given the assignment f_0, the agreement features should be first person. If we look at MMA in Kannada, this is exactly what we do see (Nadahalli, 1998). In Kannada, like in Icelandic, the MMA *ta:an* can have only a third person antecedent, yet the verbal features it appears in agreement configuration with are first person. Observe the following contrast:

(49) $Gopi_1$ [$ta:nu_1$ barti:ni] anta he:Lida

Gopi self come1st$_{Sing}$ COMP say-3rdMascSing

'Gopi said that he will come'

(50) * $Gopi_1$ [$ta:nu_1$ barta:ne] anta he:Lida

Gopi self come$3^{rd}_{MascSing}$ COMP say-3^{rd}MascSing

'Gopi said that he will come'

According to Nadahalli (1998) (49) means something like *Gopi said 'I will come'*. This interpretation is exactly as the MMA axiom (39) would predict, a *de se* reading.

In Icelandic, as in other Indo-European languages (among those that have MMA), there is a gap in the MMA paradigm. The nominative form is unattested. Verbal agreement and nominative case are concomitant, and as such, verbal agreement requires a configuration in which the person features of the nominative argument can be checked. Now, if the MMA in this configuration actually were assigned any particular utterance level features, these should be available for checking, and an agreement pattern would be possible. The difference between these languages and Kannada is plausibly explained as a difference in whether or not verbal agreement is responsive to non-utterance context assignments. A language whose verbal agreement can access only features that have been checked with respect to the utterance context will be unable to generate a {nominative + agreement} configuration for an argument which is unassigned in the utterance context. Icelandic and other languages which have MMA, but are lacking a nominatively cased MMA are, on this view, such languages. The reason there are no nominative MMA in Indo-European Languages that have MMA (Icelandic, Dutch, Norwegian, etc) is, according to this line of reason, that MMA has no utterance context features and Indo-European agreement, being strictly an utterance context phenomena is unable to generate

a {nominative + agreement} configuration. The unattested nominative forms of MMA in these languages confirms that the UC Hypothesis (given the *de se* interpretation of MMA) enforces the lack of utterance context assignment to MMA. In Kannada, an agreement configuration is readily available with nominative MMA since non-utterance context assignments are accessible to the agreement process in this language. Non-utterance contexts are able to provide the needed agreement features to Infl by agreement with the nominative argument with the non-utterance context assignment. There is no utterance context assignment here either; both the MMA and the agreement have the queued-context assignment. This shows up in the {nominative + agreement} configuration as {***origin*** + 1st person-agr}(γ), where γ is the queued context.

Another argument-type that is a good test for its behavior with respect to utterance context assignment is phonologically null arguments. In Kannada, a phonologically null argument in subject position of a tensed clause can co-refer with an antecedent of any person where the verbal agreement is first person.

(51) Gopi$_1$ [pro$_1$ barti:ni] anta he:Lida

Gopi *ec* come-1st-Sing COMP say-3rdMascSing

'Gopi said that he will come'

(52) ninu$_1$ [pro$_1$ barti:ni] anta he:Lide

you *ec* come-1st-Sing COMP say-2nd-Sing

'you said that you will come'

(51) and (52), like (49) have only the *de se* reading. *pro,* like PRO, differs from MMA in that these phonologically null arguments can co-refer to an argument of any person type. Contrast (52) with (53) in this respect.

(53) * $ninu_1$ [$ta:nu_1$ barti:ni] anta he:Lide

you self come-1st-Sing COMP say-2nd-Sing

This difference is of exactly the same order as that seen with MMA and PRO. MMA has the feature [$_{DP}$ ∝ ground] in the utterance context, which is compatible only with arguments which are also unspecified for ground feature, 3rd person arguments. *pro*, having no features in the utterance context is unrestricted with respect to assignment, and is therefore, like PRO in being compatible with any type of antecedent. PRO and *pro* are, in fact, typologically indistinct as far as this account goes. Both are phonologically empty pronouns.

Using an overt first person pronoun with first person agreement in the subordinate subject position also yields the *de se* reading, and in addition, it can refer to the speaker of the sentence. The ambiguous readings are as in (54) and (55)

(54) $Gopi_1$ [$na:nu_1$ barti:ni] anta he:Lida

Gopi I come-1st-Sing COMP say-3rdMascSing

'Gopi said that he will come'

'Gopi said that I will come'

(55) $ninu_1$ [$na:nu_1$ barti:ni] anta he:Lide

you I come-1st-Sing COMP say-2nd-Sing

'you said that you will come'

'you said that I will come'

The first reading of "na:nu" (I) in the above sentences shows that an uttered form ***may*** be given non-utterance assignment. The UC Hypothesis would legislate against it receiving utterance valuation as well. The sentences are reported as ambiguous. That is, "na:nau" refers to either the speaker or to Gopi, not both simultaneously. It is clear that the capacity na:nu has for non-utterance assignment is dependent on its relation to first person agreement. In the following sentence, the subordinate clause is infinitive, and in contrast to (54), it is unambiguous. The first person pronoun in the absence of first person agreement can only refer to the speaker of the sentence.

(56) Gopi [na:nu i: kelasa ma:Dalu] oppida

Gopi I-nom this work do-inf agree-3singMasc

'Gopi agreed for me to do this work'

With plural referents, we get the same array of readings:

(57) $Raju_1$ mattu $Gopi_2$ [pro/ta:vu/$na:vu_{1+2}$ barti:vi] anta he:Lidaru

Raju and Gopi *ec*/self-pl/ we come-1st-Plur COMP say-3rd-Plur

'Raju and Gopi say they will come' (*de se*)

'Raju and Gopi say we will come' (available only with *na:vu*)

(58) ni:vu_1 [pro/ni:vu/na:vu_1 barti:vi] anta he:Lidiri

you-Plur *ec*/you-pl/we come-1st-Plur COMP say-2nd-Plur

'You say you will come' (*de se*)

'You say we will come'(available only with *na:vu*)

The above sentences show that Kannada provides morphological evidence for the claim that *de se* readings are delivered by non-utterance context assignments. Specifically, where the queuing environment provides an f_0 argument, ***origin*** features are assignable to an argument of the same index. Given the UC Hypothesis, we expect this assignment to be delivered only to arguments that are utterance unspecified – MMA, PRO and *pro*. These elements require some sort of assignment according to the Lexical Postulate, hence the *de se* reading. In configurations that require agreement, we see the morphological reflex of this, as (49) through (58) show. There is similar morphological evidence for arguments co-indexed to f_p arguments provided in (59) and (60).

(59) Gopi($_1$) Rajuwigi($_2$) [*pro*($_2$) ba] anta he:Lida

Gopi Raju ec come2ndSing COMP say-3rdMascSing

'Gopi told Raju to come'

(60) Gopi($_1$) Rajuwannui($_2$) [*pro*($_2$) ba:] anta otta:yisida

Gopi Raju ec come2ndSing COMP force-3rdMascSing

'Gopi forced Raju to come'

When the agreement is concordant with the antecedent, whether the argument is phonologically null or overt, the only reading available is *non de se.* That is, (61) and (62) are only true in the following sorts of circumstances. Gopi is an auto-racer who was injured in a race the previous day, who as a result, is suffering from amnesia. He reads in the sports pages of the newspaper about an auto-racer who builds his own race cars rather than being provided one by rich automotive corporations as is the usual case with speed drivers. Gopi is filled with admiration for this fellow when he reads that the guy won the most recent auto-race. What he doesn't realize is that he is, in fact, reading about himself (Nadahalli, pc)

(61) $Gopi_1$ [pro_1 geddidda:ne] anta tiLididda:ne

Gopi ec won-3rd-MascSing COMP think-3rdMascSing

(62) $Gopi_1$ [$awanu_1$ geddidda:ne] anta tiLididda:ne

Gopi he won-3rd-MascSing COMP think-3rdMascSing

To verify that this co-referentiality is representational, observe that the following quantified version has, like the constant term version above, only a *non de se* reading.

(63) pratiyobba $chaalaka_1$ [pro_1/$awanu_1$ geddidda:ne] anta tiLididda:ne

every driver *ec*/he won-3rd-MascSing COMP think-3rdMascSing

The improbable test scenario was: a group of head-injury patients are involved in a motivational therapy program. The therapist reads a series of descriptions in which each of the patients has won some sort of victory. The drivers in the group listen carefully to the driving victory stories and believe them, yet none recognize themselves in the stories. The same *non de se* restriction holds for second person antecedents.

(64) ninu$_1$ [*pro*$_1$ geddidda:ye] anta he:Lide

you *ec* won-2nd-Sing COMP say-2ndSing

(65) ninu$_1$ [ninu$_1$ geddidda:ye] anta he:Lide

you you won-2nd-Sing COMP say-2ndSing

(64) and (65) are only true in a situation like this: In a school-wide writing contest, Gopi, a contestant, announces to the school "Gopi geddidda:ne " (Gopi won). The sentences could not be used where Gopi announces "na:nu geddidda:ni" (I won).

Section 2.3.2 Italian Agreement Patterns

In a curiously similar restriction: a nominative subject of a subjunctive clause can co-refer to the matrix subject only if it is read *non de se*[31]. The Italian sentence (66) expresses a *non de se* hope. (Antonio Gulli, pc)

(66) Giorgio(i) spera che [*pro*(i) vincesse]

George hopes that *ec* won-3rdSing^{SBJ}

Imagine a similar situation, but this time we have a whole hospital ward full of amnesiacs who compete in various kinds of competitions, a jockey, a poet, a cook, etc. As a sort of motivational treatment, they are all allowed to compete in their respective fields and then each of them are given their past history in their fields of endeavor to read about. But in each case, the patient reads the case history, and hopes that the protagonist has won, but fails to realize that the it is herself or himself that she or he is reading about.

(67) Ogni paziente(i) spera che [*pro*(i) vincesse]

Every patient hopes that *ec* won-3rdSing^{SBJ}

The same restriction exists in other persons. (68) is not possible as a *de se* sentence.

(68) Tu speri che [*pro* vincessi la corsa]

you hope that *ec* won-2ndSing ^{SBJ} the race

But in the circumstance where Gianni the jockey rides different horses all the time – whoever pays him, that's the horse he rides. He forgets sometimes which horse he will be riding on a given day. He mentions to the speaker of (68) that riding a mean horse named "Blue Devil" is such a dreadful experience that he hopes whoever was riding Blue Devil yesterday won the race, forgetting that it was he who was riding Blue Devil. In such a case the speaker can say (68), albeit with a certain wryness.[32]

Pronouns in subjunctives in non-nominative appear to be uncommitted with respect to *de se/non de se* interpretation. This is the behavior we see with pronouns, generally, in fact. Both the Italian and Kannada sentences below are grammatical on either *de se* or *non de se* interpretation.

(69) Isabella(i) volle che [pro(j) la(i) telefoni]
Isabel wanted that he/she her telephone^{SBJ}

(70) Giorgio(i) sperò che [gli(i) piacerebbe che Maria vada a New York]
George hoped that him^{DAT} please^{SBJ} that Maria go to New York
'George hoped that he would like it for Maria to go to New York'

(71) Gopi(i) [Janaki awanannu(i) pri:tista:Le] anta he:Lida
Gopi Janaki him love-3rd-MascSing that say-3rdMascSing
'Gopi says that Janaki loves him'

(72) Gopi(i) [awanagi(i) gottu] ante he:Lida
Gopi he^{DAT} know-sg-neut that say-3rdMascSing

We have now seen instances of *de se* and *non de se* in three languages. Let us take stock of the phenomena as a whole. In all cases where a *non de se* interpretation is available, there is a also a dedicated *de se* version of the sentence available. There is an

important cut to be made, however, between the class of sentences that allow only a *non de se* interpretation and the class of sentences that are merely compatible with a *non de se* interpretation. In Romance the forced *non de se* cases occur in subjunctive clauses, wherever the nominative subject (overt or not) of the subjunctive is co-indexed with the f_0 argument of the matrix clause. In Kannada, a nominative pronominal (as opposed to MMA)[33] subject (overt or not) in a subordinate clause is forced as *non de se* if its agreement is not first person. In other co-indexation configurations with the matrix subject (the f_0 argument in the examples we have looked at) and some argument in the subordinate clause, in subjunctive clauses in Icelandic and Romance, and in subordinate clauses in Kannada,[34] pronouns are compatible with either a *de se* or a *non de se* interpretation. MMA in the two languages that have it (Kannada and Icelandic) and PRO (subject of agreement-less clauses) in all three languages are systematically *de se*, when co-indexed to an argument that is designated as the f_0 of the embedded context.

The two cases of forced *non de se* interpretation stem from the same source: a tension in choice of agreement pattern. In Italian, and in Romance languages in general, verbs that subcategorize for a subjunctive clause can also select an infinitive clause. The result, from the user's point of view, is that you always have a choice of one of two clause types: one having agreement, or not. If you choose the non-agreement type, you get PRO, a dedicated *de se* argument. Failing to choose an agreement pattern that yields *de se* forces the implicature that you intended a *non de se* argument. In Kannada, the relation between infinitive and non-infinitive subordinate clauses is not so close (Nadahalli, 1998). That is, there are many instance where only one or the other will do. However, in

Kannada, a speaker can choose between two agreement patterns: an utterance context agreement pattern, or a non-utterance context agreement pattern. Failing to choose an agreement pattern that yields *de se* forces the implicature that the speaker intended a *non de se* argument.[35]

In positions where the argument alone represent its context assignment – all but subject position, in other words, neither implicature is forced when using an expression that has utterance context assignment. In Romance, there is no MMA, and phonologically null arguments cannot occur anywhere else. So even if an argument in one of these other positions is co-indexed to an f_0 antecedent, since it has an utterance context assignment, it is by the UC Hypothesis unable to receive any other context assignment. It is thus silent about assignments to other contexts. In Kannada and Icelandic, languages that do have MMA, if the speaker does not choose MMA, even though he could have, no implicature is forthcoming on the basis of the argument type alone. A phonologically overt pronoun is silent about assignments to other contexts.

Section 3 Distributional Predictions

The previous sections laid out the formal semantics of *de se* pronouns and set forth a theory of how the morphology of these elements contributes to their interpretation. Let us now investigate how the patterns exhibited by MMA are predicted by the requirements of the valuation axiom for MMA , (39) Section 2, and the consequent interaction with context-queuing. The data seen in Chapter One suggests that relevant factors which determine the distribution of the long-distance MMA versus ungrounded

mono-morphemes should be partitioned as follows:

(1) (i) The effect of co-reference with subjects as against non-subjects in these environments:

(ii) Complement clauses as against non-complement clauses

(iii) Indicative complement clauses as against subjunctive and infinitive complement clauses

Issues (i) and (ii) are discussed in section 3.1. Sections 3.2 and 3.3 deal with issue (iii).

Section 3.1 Distributional Properties of *De Se* Pronominals

Given what we have learned about context-queuing, several distributional predictions can be made. First, subject-orientation (or more accurately, agent-orientation) is expected. Consider, for example (2) and (3) in which sig and sína are ungrammatical:

(2) * Ég sagði $Jón_1$ að þú hefðir svikið sig_1

I told Jon that you had^{SBJ} betrayed self

(3) * Ég sagði $Jón_1$ að þú hefðir svikið móður $sína_1$

I told Jon that you had^{SBJ} betrayed mother self's

Clearly, since Ég, not Jon , falls into Function O with respect to the embedded clause, there will be no interpretation defined between the position occupied by Jon and an

occurrence of the MMA. Hence, the MMA and thus (2) and (3) are uninterpretable. The nominative first person effects seen in Kannada and the obviative effects in Italian are also subject-oriented, and for the same reason. Observe the following pair.

(4) * Gopi($_1$) Rajuwigi($_2$) [*pro*($_2$) barti:ni] anta he:Lida
Gopi Raju ec come1stSing that say-3rdMascSing

(5) Gopi($_1$) Rajuwigi($_2$) [*pro*($_2$) ba] anta he:Lida
Gopi Raju ec come2ndSing that say-3rdMascSing
'Gopi told Raju to come'

When the subordinate subject is co-indexed to an argument that is not a Function O argument, it cannot be assigned the discourse function ***origin***, thus first person agreement features do not check. This explains the ungrammaticality of (4). The matrix object *does* fall into Function P however, and thus the subordinate subject co-indexed to it is assigned the discourse function ***presentee***. This assignment is consonant with second person agreement, as (5) attests. Similarly, the obviation effect seen in Romance languages disappears when the nominative argument is not tied to the Function O argument in the queuing environment.

(6) Pietro$_1$ convincerà Giorgio$_2$ che [*pro*$_2$ arrivi presto]
Peter will convince Jordi that he arrives early

(7) * Pietro$_1$ convincerà Giorgio$_2$ che [*pro*$_1$ arrivi presto] {*NB * on the de se reading}*

Peter will convince Jordi that he arrives early

It is also predicted that even if an argument is in subject position, if it is not an intensional agent, it will fail to satisfy the definition of Function O . The matrix subjects in (8) and (9) contrast in this respect, thus the difference in grammaticality.

(8) Jón$_1$ krafðist Þess að við hugsuðum stöðum um sig$_1$

Jon demanded it that we thought^{SBJ} constantly about self

(9) * þetta vandamál$_1$ krafðist Þess að við hugsuðum stöðum um sig$_1$

this problem required it that we thought^{SBJ} constantly about self

Examples we have not seen which have the same explanation are those involving passivized subjects. The following case demonstrates that the antecedency condition for MMA cannot be mere subjecthood:

(10) * Olafur $_1$ var beðinn um að Þú hengir að koma til sín$_1$

Olafur was asked for that you get^{SBJ} to come to self

'Olaf was asked that you be allowed to visit him'

The argument in subject position is not the agent of "ask", hence not the f_O of the

embedded context. Again, under the valuation axiom for MMA (39) Section 2, MMA is interpretable only where its antecedent falls into Function O. (10), therefore, is predicted to be without interpretation, since there is no f_0 assigned to the context the MMA is a member of. The agent of ask is not present in the passivized sentence. (10) should be contrasted with the active version which is grammatical, since here, the argument in the queuing environment which binds the MMA does satisfy the definition for Function O :

(11) Olaf$_1$ bað um að Þú fengir að koma til sín$_1$
Olaf asked for that you get^{SBJ} to come to self
'Olaf asked that you be allowed to visit him'

Running true to the predictions of the MMA axiom ((39) Section 2), there is one type of case in which a passivized subject **can** serve as an antecedent of MMA. Consider (12).

(12) Jón$_1$ var sannfærður að þú hefðir svikið sig$_1$
Jón was convinced that you had^{SBJ} betrayed self

If Jon was convinced of the proposition in subordinate clause of (12), then it follows that he believes it; thus the argument functions as the intensional agent of that clause, a Function O argument. It is reasonable to ask why the active version of (12), (13) does not allow sig to be bound by the object argument, since this position, just as much as the subject position in (12), would make the binder an intensional agent and therefore capable

of satisfying the conditions for Function O .

(13) * Jón sannfærði Mariu$_1$ að þú hefðir svikið sig$_1$

Jon convinced Maria that you had^{SBJ} betrayed self

For any given context, queued or uttered, there is only one origin. The problem with (13) is that once the context is queued, the arguments in the queuing environment define the discourse functions for it, and Jon satisfies Function O with respect to this context. Notice however, if the subject is unable to function as an intentional agent, as in (14), the object of sannfærði is a fine antecedent.

(14) Háttarlag Jóns sannfærði Mariu$_1$ að þú hefðir svikið sig$_1$

Behavior Jon's convinced Maria that you had^{SBJ} betrayed self

Section 3.2 Not Subject Oriented, but Agent Oriented

In fact, (14) shows that what has been labeled "subject-orientation" in the literature is more properly described as agent-orientation. It is difficult to find examples with both subject and object matrix arguments, where the subject is not the agent of the embedded clause and the object is, which is perhaps why object binders have been overlooked. The relation between the MMA and its binder does not, in fact, appear to be capturable by the structural notion of subjecthood. In order to truly test competition between subject and object for antecedency, more complex contrasts are needed. The

following contrast is instructive:

(15) Fréttir Jóns$_1$ sannfærði hann$_1$ um að Ashcroft hefði svikið sig$_1$

Jon's information convinced him that Ashcroft had betrayed self

(16) * Fréttir Jóns$_1$ sannfærði Önnu$_2$ um að Ashcroft hefði svikið sig$_2$

Jon's information convinced Anna that Ashcroft had betrayed self

In (15), the source of the information and the source of the conviction are the same. No conflict arises. In (16), the source of the information and the source of the conviction are in conflict. It matters also whether or not a predicate of intension is introduced. (17) contrasts with (14) in this regard.

(17) * Tilkynningin sannfærði njósnarana$_1$ um að Ashcroft hefði svikið sig$_1$

the announcement convinced the.spies that Ashcroft had betrayed self

The structural notion of subjecthood does no work in defining the properties of MMA, neither is it dependent on a binding relation with its antecedent. The following sentences allow MMA which are co-indexed to but not bound by a Function O argument.

(18) Skoðun Jóns$_1$ er að þú hafir svikið sig$_1$

Opinion Jon's is that you have betrayed self

(19) Svar Jóns$_1$ var að Mary hefði séð sig$_1$

Answer Jon's was that Mary has seen self

(20) Vitnisburður Jóns$_1$ er að Mary hafi séð sig$_1$

Testimony Jon's is that Mary had seen self

As above, ungrammaticality results if another predicate of intension intervenes.

(21) * Í vitnisburði Jóns$_1$ er staðfest að þú hafir svikið sig$_1$

Testimony Jon's asserts that you betrayed self

(22) * Vitnisburður Jóns$_1$ neyðir okkur til að sakfella sig$_1$

Testimony Jon's forces us to convict him

Section 3.3 The Role of Mood in Determining Context Assignment

The reader will recall from the data presented in Chapter One that one of the hallmarks of grammatical MMA structures is the presence of the subjunctive, not only in the clause that the MMA is embedded in, but in all the clauses intervening between it and its antecedent. We can see that even if the MMA is itself in a subjunctive clause, any break in the chain of subjunctivized verbs between the antecedent and it results in ungrammaticality. This can be demonstrated with a verb that may select either an indicative or a subjunctive clause. A verb which is normally indicative-selecting, such as

vita (to know) is embedded under a subjunctive-selecting verb vona (to hope) in the pair below. (23) contrasts with (24) in the selection of mood for the complement clause of vita. This contrast in mood selection results in a contrast in grammaticality. The underlined verb indicates the difference in mood.

(23)* $Jón_1$ vona að þú vitir að ég hafði talið að þú hefðir ekki svikið sig_1

Jon hopes that you know^{SBJ} that I had^{IND} believed that you had not betrayed^{SBJ} self

(24) $Jón_1$ vona að þú vitir að ég hefði talið að þú hefðir ekki svikið sig_1

Jon hopes that you know^{SBJ} that I had^{SBJ} believed that you had not betrayed^{SBJ} self

The valuation of sig in (23) is certainly calculable and licit on the given indexing, provided the matrix verb vona queues the context contained in its complement. There must be some property of the subjunctive that is required for calculation to take place, however, since this valuation only goes through when the blocking indicative is removed, as in (24).

The basic insight behind the semantics given for *de se* as well as *de dicto* interpretations is that a speaker may, under certain circumstances, take on the viewpoint of some other intensional agent. The theory presented here is built to formally represent this viewpoint in terms of the a semantically defined context. But, it must be said, if a speaker makes an assertion of this kind, she is making a distinction between her viewpoint and that of the other intensional agent. Otherwise, there would be no

pragmatic utility in invoking the other agent, or his intensional state. In terms of the present theory, contexts which are open to non-utterance context assignments will need to be formally distinguishable from those that are not. Given that the two dedicated *de se* expressions, MMA and PRO, occur in subjunctive and infinitive clauses, we can assume that at least one condition is the presence of a [-indicative] head. The entire content of the context would need to be inside its scope. On my analysis, arguments that get non-utterance context assignments are members of a context that has been queued via a verb, rather than being uttered. Crucially, *de se* pronouns occur in contexts that are distinct from the utterance context. I have argued that what permits an argument to receive a non-utterance assignment is the absence of an utterance assignment. In other words, it is precisely because assignment is left open with respect to the utterance context that the phonologically empty PRO and the all-but-empty MMA get their assignments from another context.

Remaining open, or unassigned with respect to the assignment of contextual factors is a consequence of not being grounded by a particular physical event. The material conditions inherent in an utterance provide its contextual factors. In contrast, the context factors of verb-queued contexts are attributes, which if supplied, are supplied via the valuations of the larger context which introduces it. All of the context factors $\{f_O, f_P, f_T, f_L\}$ are "on" for utterance contexts. For verb-queued contexts, only the factors which the verb is able to supply, namely, $\{f_O, f_P,\}$, can be turned on. A context which has f_T as a member, is a context which has been defined with respect to some particular instant of time. In utterance contexts, this instant is established by the moment of

utterance, which is inherently tied to the utterer. A speaker can make an assertion about someone else's intensional state when he refers to that person in relation to some particular intension (e.g. "think", "hope", "say", etc), but neither the moment of the assertion, nor the intensional relation have the capacity to set any particular instant of time with respect to the intension. This, I assume, is the crux of the [-indicative] condition on MMA and *de se* pronominals in general. That is, contexts queued by utterance are intrinsically supplied the context factor f_T, the temporal factor, while this factor is absent in verb-queued contexts.

It is not controversial to make this claim for queued contexts which are infinitival. In terms of morphological presence, it is clear that there are no tense morphemes. There being no temporal reference in an infinitival clause, its context will contain no f_T as a member of its sequence. It is less trivial to substantiate the claim that subjunctive clauses are absent temporal interpretation. The work of Iatridou (2000) and von Fintel (1998) however, show that the tense on subjunctives is "fake". Or as it is said in Schlenker (2004) "or to put it differently, the embedded tense inherits the features of the matrix tense in a purely morphological fashion".[36] This claim applies to the class of subjunctive clauses, inclusive of the type seen with certain types of conditionals, as well as the subjunctive clause that are the complement of verbs that select them. With the latter type, the grammatical phenomena known as "sequence of tense" is in play. This phenomena is exhibited across many language types[37]. The sequence of tense effect is a requirement that verbs dominated by the matrix verb bear the same tense as it, if they are subjunctive. Indicative verbs are not subject to this constraint, as the following pair of Icelandic

sentences show. (Siggurðsson, 1990)

(25) Jón veit að María kemur / kom hingað

Jon knows that Mary comes$^{Pres\text{-}IND}$ / came$^{Pasr\text{-}IND}$ here

(26) Jón segir að María komi / *kœmi hingað

Jon says that Mary comes$^{Pres\text{-}SBJ}$ / came$^{Pasr\text{-}SBJ}$ here

In an environment where a speaker has no grammatical choice in the selection of tense morphology, it is perhaps unsurprising that no actual temporal reference is being made. Where tense morphology appears, the case can be made that there is no actual temporal reference even for grammars in which the subjunctive plays a limited role.[38] With the premise that subjunctive tense is indeed, non-tense, however that comes about in terms of grammatical operation, we can conclude that the semantic representation of a context built from subjunctive clause differs crucially from that of an indicative clause. The former will fail to contain a temporal reference, while the latter will contain one. In terms of the theory of context set forth here, the consequence of adopting this analysis of subjunctives is that contexts built from infinitive and subjunctive clauses will lack factor f_T, the temporal factor. Further, in a grammar with a real indicative/subjunctive contrast, an indicative clause necessarily triggers an f_T for its context.

Subjunctivity is a peculiar bag of tricks; environments that trigger subjunctive use in one language fail to do so in another. In a given language, the usages are various and

not obviously related. In Einarsson (1949) there is an inventory of subjunctive usages in Icelandic. The list is: að-clauses of wishing, asking commanding, needing, thinking, fearing, hoping, denying, expecting, feeling, seeming; að-clauses of reported speech, conditional clauses, result clauses, purpose clauses, concessive clauses, comparison clauses, wishes, suggestions and exhoratives.[39] There is no syntactic property that unites this class of structure. Further, from this inventory, no "meaning" of subjunctive is forthcoming. That is, there does not to seem to be some global property that comes with the subjunctive all on its own. There are properties that it confers in certain configurations, however, that contrast with those that come about with the use of the indicatives in that configuration. Let us inspect the list first for configurational distinctions. The relevant class of structures thus set apart will gives us the pertinent class to compare with the indicative.

Section 3.3.1 Types of Subjunctives

Examining the inventory of contexts where subjunctive clauses occur according to Einarsson (1949), there is a type difference which can be exploited here; the list includes both subordinate and co-ordinate subjunctive clauses. If two clauses are unordered with respect to one another, I take this as evidence that the relationship between them is one of co-ordination rather than subordination. The chart below summarizes which of the subjunctive subtypes are congenial environments for MMA. Sentences of the acceptable two subtypes, we have seen. Examples of the other subjunctive usages which do not have the right properties to host MMA are given in (27) through (36).

Subjunctives of Bi-clausal Constructions [40]	
Að-clauses of wishing, fearing, thinking	✔ MMA
Að-clauses of reported speech	✔ MMA
Conditional Clauses	* MMA
Purpose Clauses	* MMA
Concessive Clauses	* MMA
Result Clauses	* MMA
Comparison Clauses	* MMA

Conditional (Einarsson, 1949).

(27) Ég kem ekki, nema ég geti — Nema ég geti, ég kem ekki

I come not unless I can[SBJ] — unless I can, I come not

Thráinsson, pc

(28) * Hann$_1$ fór aldei neitt, nema sér$_1$ væri boðið

He never went anywhere unless self was[SBJ] invited

Purpose (Einarsson, 1949)

(29) Hann tekur lán, til þess að sonur hans geti haldið áfram námi

he took a.loan, so that son his continue[SBJ] ahead studying

Til þess að sonur hans geti haldið áfram námi, hann tekur lán

'so that his son might continue studying, he took out a loan'

Thráinsson, pc

(30) * Jon$_1$ hoppaði og hamaðist svo að María tæki eftir sig$_1$

Jon jumped up and down so that Maria see[SBJ] self

Concessive (Einarsson, 1949).

(31) Ekki batnar veðrið, þo loftvogin sé að stíga

Not weather improves, although barometer is^{SBJ} rising

Þo loftvogin sé að stíga, ekki batnar veðrið

although the barometer is^{SBJ} rising, not weather improves

Thráinsson, pc

(32) * Jon$_1$ kom snemma þótt enginn hitti^{SBJ} sig$_1$

Jon came early though nobody meet^{SBJ} self

Result

Result clauses are put in subjunctive, if the result is denied. (Einarsson, 1949).

(33) Þeir voru ekki svo grunnhyggnir, að þeir tryðu þessa

They are not so gullible that they believe^{SBJ} this

Thráinsson, pc

(34) * Hún$_1$ var ekki svo illa til fara að Jón horfði framhjá sér$_1$

She was not so ill-dressed that J looked^{SBJ} past self

'She was not so badly dressed that John ignored her'

Comparison

In comparison clauses, the subjunctive is used when the comparison clause is imaginary, otherwise indicative is used. Einarsson (1949)

(35) Hann fór hratt, sem fugl flygi, á skíðunum
he travelled fast as a.bird flew^{SBJ} on the.skis
'He travelled as fast as a bird would fly, on the skis

Thráinsson, pc

(36) * Hann$_1$ leit ekki á hana frekar en hún hefði aldrei hitt sig$_1$
he looked not at her any more than if she had^{SBJ} never met self

In the model being presented here, valuating MMA requires an environment where it can receive an assignment with respect to a context within the utterance context. It will be recalled that a context is queued either by the act of utterance or by asserting a relation between an intension and a context factor, where this relation is a lexical entailment of a verb's argument structure. Syntactically, nothing has been specified as to the relation between the item that queues and that which it queues. Given the division between co-ordinate and subordinate clauses seen with MMA, the properties of this device can be constrained in a simple way. The relation is head to complement: a head can queue its IP complement. Restricting the relation to head-complement relations rules out most of the subjunctive environments, and determines the að-clause subjunctives as

suitable contexts for queuing by the verbs that select them. The structural condition on MMA listed in (1)(ii) falls out of the lexical axiom for MMA (39) Section 2, given the head-complement constraint on context-queuing.

Of the subjunctives inhospitable to MMA, result and comparison clauses fail the ordering test. That is, they, like the að-clause subjunctives, are subordinate clauses. These are not, however, environments that allow MMA, as (34) and (36) show. Where they differ is with respect to the syntactic status of the head of which they are complements. The að-clauses are plausibly selected by verbs, whereas the result and comparison clauses are selected by a functional head which determines a degree phrase in combination with the adjective. Even if we were to consider this functional head "sem" or "svo" as capable of queuing the subjunctive clause, these heads fail to denote a relation that would determine the necessary context factor, f_O, for the queued clause. For this reason the valuation on the MMA in such clauses will fail, rendering them ungrammatical. The only subjunctive candidates left for successful queuing, then, are the að-clauses.[41] The constraints thus far determined for clauses hospitable to MMA is that they define contexts that have the factor f_O turned on, and the factor f_T turned off. The former is necessary for licensing the feature [origin] which the MMA pronoun bears. The latter property has been shown to be determinative of the clause type which is selected as the context by the queuing verb. In order to discover an explanation for this constraint on the context type, the semantic properties of subordinate subjunctive clauses are explored.

Section 3.3.2 Semantic Properties of að-clause Subjunctives

In Thráinsson's 1991 article on MMA, he discusses the semantic effects of the subjunctive. With subjunctives of the að-clause type, he argues that by using a subjunctive, a speaker does not commit himself to the truth of the subordinate clause. Indicatives, on the other hand, trigger the presupposition that the subordinate clause is true. He points out that subjunctives of the concessive type do not line up with að-clause subjunctives, in this respect. That is, consessives, like indicative að-clauses, presuppose the truth of the clause, since (37) is a contradiction. "⊤⊥" indicates the semantic property of contradiction:

(37) ⊤⊥ Jón er hér þó að María sé hér, en María er ekki hér

Jon is here although Maria is^{SBJ} here, but Maria isn't here

By looking at truth presuppositions, he shows that the basic split, at least with að-clause subjunctives, is that the difference of mood indicates a difference in factivity. Although this is close to correct, – there are no indicative clauses which are in the complement of a non-factive verb – this suggestion is not completely correct in that there are factives which take the subjunctive, such as harma, (to regret), and upplýsta, (to reveal). To demonstrate that these verbs share the property of factivity with vita, (to know) as against telja (to believe) consider the following set of sentences.

(Thráinsson, (1990) (1991))

(38) ⊤⊥ Jón vissi að Maria hafði komið en hún hafði ekki komið

Jon knew that Maria had^{IND} come but she had^{IND} not come

(39) ⊤⊥ Jón upplýsti að Maria hefði komið en hún hafði ekki komið

Jon revealed that Maria had^{SBJ} come but she had^{IND} not come

(40) ⊤⊥ Jón harmar að Maria hafi komið en hún hefir ekki komið

Jon regrets that Maria has^{SBJ} come but she has^{IND} not come

(41) Jón telur að Maria hafi komið en hún hefir ekki komið

Jon believes that Maria has^{SBJ} come but she has^{IND} not come

These factive verbs, upplýsta and harma are like telja and unlike vita in that MMA can occur within their complement clauses, as the following sentences show:

(42) Jón$_1$ harmar að þú skulir hafa svikið sig$_1$

Jon regrets that you should^{SBJ} have betrayed self

(43) Jón$_1$ upplýsti hver hefði barið sig$_1$

Jon revealed who had^{SBJ} hit self

(44) $Jón_1$ telur að María hafi svikið sig_1

Jon believes that Maria has^{SBJ} betrayed self

(45) * $Jón_1$ veit að þú hefur svikið sig_1

Jon knows that you have^{IND} betrayed self

The motivation for the context-queuing was to allow distinctions in a speaker's and an ascription agent's representations of discrete members of a valuation sequence. Factivity is too gross a distinction, however; it covers the entire clause. Still, it appears to be the right category; if using indicative indicates no divergence between the speaker and the ascription-agent in truth-value assignment, neither does it seem to permit divergences in valuation of elements within the clause. For a speaker to fail to use the indicative, or fail to choose a verb that subcategorizes for subjunctive (to choose *telja* rather than *vita*, for example) is to leave the possibility for divergence open. Because there is an assertion of non-disjointness midway, the effect of the intermediate indicative in (23) is to prevent the expressions in more deeply embedded clauses from being queued with respect to the matrix clause.

(23)*$Jón_1$ vona að þú vitir að Jens hafði talið að þú hefðir ekki svikið sig_1

Jon hopes that you know^{SBJ} that Jens had^{IND} believed that you had not betrayed^{SBJ} self

That is, the most deeply embedded clause is queued only with respect to the verb

immediately dominating it, talið (believed). The italicized portion of (46) represents the context that has been queued relative to the intermediate clause. The bold portion of (46) represents the queuing environment available to that context.

(46)

Jón$_1$ vona að þú vitir^{SBJ} að **Jens hafði^{IND} talið** *[að [þú hefðir^{SBJ} ekki svikið sig$_1$]]*

The context represented by the italicized portion of (46) is subjunctive, therefore the f_T is turned off as required. The f_O relation is also is turned on, via the relation entailed by the verb talið (believed) between its complement clause and its subject. Thus, Jens is a perfect antecedent of sig. But beyond this point, there is no context which meets both requirements: f_O on and f_T off. The relation between the verb vitir (know) and its two arguments, the subject and complement clause delivers the f_O, [þú], (you) of the context, [að Jens hafði^{IND} talið að þú hefðir ekki svikið sig$_1$] (that Jens had believed that you hadn't betrayed self). But this is a context that has the f_T turned on, since there is a temporal factor supplied by the indicative past tense morpheme in hafði (had). This property of the intermediate clause also prevents the proper set of relations from holding between vona (hope) and its complement clause. The context which could be queued by the matrix verb, represented with italics in (47), has a temporal reference within it, because of the f_T defined for the inner context,

(47)

Jón$_1$ vona *[að þú vitir^{SBJ}* ~~*[að Jens hafði^{IND} talið [að [þú hefðir ekki svikið sig$_1$]]]]*~~

represented with strike-out in (47). Here, the queuing environment, represented with bold, provides a relation, in virtue of the lexical properties of vona (hopes) that meets with the criteria for providing the f_O, Jon, of the (italicized) context, but with the temporal factor defined, the context is of the wrong type.

There is an issue which the above discussion leaves unresolved: whether either of the contextual requirements for MMA, f_T off and f_O on, takes precedence over the other. However, as was pointed in the introduction to this section, the former is a property that applies to the entire clause, while the latter is locally restrictive; it satisfies the licensing condition of the MMA itself. That is, it may be that the context factor f_O can only be turned on for a non-utterance context in the absence of factor f_T, and it is the presence of the former that is required for the licensing of MMA, as well as *de se* PRO. [42] Thus, the prohibition on a temporal factor is the more global. If one adopts the premise that establishing the f_T is inherently an utterance context assignment, then we could plausibly draw the conclusion that the other factors of a context with an f_T are utterance context assignments. This would be to say, that for any context, in the presence of f_T, the f_O is necessarily the utterance context f_O, the speaker. Thráinsson's observation about the factivity of indicative embedded clauses is in line with this suggestion. That is, factive clauses carry a presupposition of truth on the part of the speaker. The temporal factor of a context, if inherently an utterance context factor, would prevent any non-utterance context factors from being assigned. A possible reason that this relation lines up with the factivity of indicative embedded clauses, and the lack of it with the non-factivity of embedded subjunctive clauses might derive from the way semantic valuation proceeds

given a set of valuations of an IP. Truth-values can be assigned to a subject-predicate relation, given some set membership conditions, only with respect to a given point in time.[43] That is, propositions are time-sensitive. Were subjunctives and infinitives to be assigned a temporal factor, a truth-value would presumably be calculable for those clauses. But non-factive sentences are precisely those clauses about which the speaker makes no truth-value assertions.

There is other evidence apart from the distribution and interpretation of MMA in subjunctives to claim that the use of the subjunctive in complement clauses gives rise to a semantic property of the clause as a whole. That is, to a semantic property beyond the mere lack of temporal reference. Thráinsson shows that there is an entailment of volitionality on the part of the subject concomitant with the use of the subjunctive. The following contrast makes that point with a minimal pair made available by the verb upplýsta (to reveal). It can take either an indicative or a subjunctive complement.

(48) Jón upplýsti óviljandi hver hafði bariÐ Harold
Jon revealed inadvertently who had^{IND} hit Harold

(49) * Jón upplýsti óviljandi hver hefði bariÐ Harold
Jon revealed inadvertently who had^{SBJ} hit Harold

This is another property that is expected from context-queuing; for the subordinate clause to be interpreted as a proposition attributed to Jón, it has to be an intension, and he has to

be its agent. This is precisely what context-queuing does: it identifies a context via the function <origin>, thus yielding an intension and its agent in one pass. We can take these observations to indicate that a non-indicative clause (of the subordinate type) is a context with a speaker-distinct assigned discourse function f_0. This is a semantic consequence of non-indicative morphology, irrespective of whether there is a particular argument which requires an f_0 assignment for licensing

Section 3.4 Logophoric Interpretation

So far, the MMA data accounted for has all been of the inter-sentential type. In Chapter One, however, it was shown that MMA can occur intra-sententially, if is interpreted logophorically. The term has not been much defined in the literature since it was first introduced by Clements (1975) as characterizing "the thought, speech and perception of individuals other than the speaker-narrator", but there are a few things that can be observed about the notion of logophoricity.[44] It applies to literary texts, rather than to discourse behavior. It comes about in portions of text where the author presents the point of view of a character, rather than either the author's own view or the omniscient view-point. Once the shift-of-viewpoint is established, the use of MMA remains consistent within that section of text.[45] Some examples follow:

(Thráinsson, 1991)

(1) Hann$_1$ lá einn i myrkrinu og hugsaði. María$_2$ var alltaf svo andstyggileg.

He lay alone in the dark, thinking. Mary was always so nasty.

Þegar Ólafur$_3$ kæmi segði hún$_2$ sér$_1$ áreiðanlega að fara

When Olaf came tell she self certainly to leave

(Sigurðsson, 1990)

(2) Formaðurinn varað óskaplega reiður. Tillagan væri svivirðileg og væri henni

The chairman became furiously angry. The proposal was outrageous and was it

beint gegen sér persónulega. Sér væri sami ....

aimed against self personally. Self was indifferent...

The presentation of someone else's viewpoint is exactly what we have seen in the case of inter-sentential MMA. The speaker, like the author of a text containing logophors, presents via the queued context, the viewpoint of some intensional agent. In text containing logophors, there is some set of literary conventions that signals the reader as to a new point-of-view. In terms of this account of MMA, the literary conventions signal that a separate context is being queued. In inter-sentential cases, what marks the queuing of a context is the presence of an infinitive or subjunctive verb in the queued context.

The mark indicating change of context is grammaticalized as [–indicative]. Similarly for the MMA found intra-sententially in literary texts, the mark for change of context is conventionalized within the traditions of that art. Apart from this difference in the mode for marking context change, the behavior of MMA is identical. It is co-referential only with intensional agents and it is interpreted *de se*. The logophoric data show that MMA should not be classified as "long-distance", inasmuch as these MMA appear in matrix clauses; they are embedded only in the sense that the sentences they appear in are embedded within the portion of the text that establishes a change of viewpoint. Though it is beyond the scope of the research here, it may be possible to correlate the literary conventions that establish viewpoint shift with tense shifts seen in what has been called "narrative tense" or "historical present".[46]

Conclusion

In this chapter, I have argued that Binding Theory divides anaphoric expressions into two categories: bi-morphemic pronouns and mono-morphemic pronouns. The binding domain of the former was argued to be determined by Principle A, the latter, by Principle B. This definition determines that MMA, PRO (phonologically empty subject of an infinitive clause), and *pro* (phonologically empty subject of a tensed clause) are subject to the same binding conditions as the traditional full-featured mono-morphemic pronouns. I showed that certain other (non binding-theoretic) properties of MMA are more similar to first and second person pronouns, while third person pronouns appear to form a class of their own. I set forth a context theory which gives the lexical properties of

first person, second person and MMA expressions. From this context theory, the formal properties of *de se* expressions is determined. I showed that MMA, subject-controlled PRO and *pro* in certain environments are determinately *de se* expressions. This property was argued to follow from the feature *origin*, akin to first person features, which is assigned to these expressions. Both the semantic behavior of these expressions, as well as the first person verbal agreement data with nominative MMA in Kannada substantiate this claim. In classifying MMA and PRO as Principle B expressions (as +pronominal, rather than +anaphoric), the unbound occurrences – logophoric MMA and arbitrary PRO – are accounted for by the same theory as their bound counter-parts, in contrast to standard theory, where they remain exotic unexplained creatures. The advantage of accounting for the anaphoric properties of MMA and PRO via their *de se* status, rather than with respect to a binding domain, is that the antecedency conditions, as well as the interpretive restrictions fall out simultaneously. So, by claiming that MMA are dedicated *de se* pronouns, I am able to predict both their distribution and their interpretation. The syntactic and semantic facts surrounding MMA have been explained in a variety of different ways in the field of anaphora research. To get an overview of these, I offer Chapter Three, which describes a sampling of influential theories that deal with MMA.

Notes to Chapter Two

1. This morphological feature may determine factors apart from the speaker/hearer/outside-object distinction. It may indicate such values as level of formality or hierarchical place, register level, proximity, or various combinations of exclusivity among plural referents. Languages vary as to whether and how certain of these values share pronominal morphology . For example, French and German which are pronominal systems that include formality distinctions, this value is shared with number distinction morphology.

2. In most Semitic languages, for example, all pronouns are inflected for gender. The cut can be made differently again, as in Malayalam, where it is only 1st person pronouns which are uninflected for gender (Jayaseelan, 1998).

3. It has been widely noted that cases involving 3rd person pronouns are "much worse" than locally bound MMA. See the discussion portion of the papers on Binding Theory in http://www.emich.edu/~linguist/linconf/

4. As an interpretation of the English gloss reveals, this contrast exists in English as well.

5. In the theory of indexing and reference of Fiengo and May (1994), a pronoun may be either dependent or independent. The reference of a dependent pronoun is resolved by the expression it is co-indexed with, if the reference of that expression is independently established. Fiengo and May show that a pronoun co-indexed to another expression may be referentially independent from it, even while being co-referential with it. The structural and use conditions for such independent occurrences are illustrated in many types of examples in that work.

6. Kamp and Reyle's (1993) Discourse Representation Theory operates over a whole discourse, each sentence updating the representation. A similar model is Irene Heim's (1983) file card semantics. Other styles of model construction are assumed by logicians in explaining how to translate natural language into predicate logic, See, for example Mates (1965). Still another style of semantic modeling is that seen in Larson and Segal (1995). Fiengo and May's (1994) has proved to be the most tractable for my purposes.

7. There have been reams and reams of paper dedicated to pinning down exactly what a Fregean sense is. See, for example the various ways that Frege's idea of "modes of presentation" is formulated in Schiffer (1987) or "vivid names" described in Kaplan (1969), or "guises" espoused in Salmon (1986) and "pretense" that Crimins (1998) talks about. The articles in Jaszczolt (2000) are dedicated to capturing the phenomena. I am not so much interested in the metaphysics of senses. For my purposes, it suffices that people regularly distinguish objects on the basis of some characteristic of that object and

that this distinction is reflected in their discourse.

8. As discussed in Chapter One of Fiengo and May (1994), there are contexts in which this implicature is canceled, where the sentences in question involve a non-co-indexed pair of third person expressions. The kind of case discussed there, which is pertinent to the present discussion is the so-called "John's coat example". As Fiengo and May see it, in certain contexts, the sentence "He put John's coat on" can be used to invite the inference that "he" and "John" are co-referential, given an appropriate premise. In the context of someone asking "who was that guy?", the inference that allows co-reference relies on the premise that typically people put their own coats on. The inference to co-referentiality in this case and the cases discussed in the text rely on information that is not locally contained in the indexical arrangement. However, in place of the more global information provided by world-knowledge premises, the first and second person inferences to co-referentiality proceed from a different source. As discussed in the text, the premise is provided by a co-indexed version of the sentence, but such a premise would not even come into play unless a speaker could count on the addressee's knowledge of the discourse rules which assign speaker/addressee relations over a sentence to the expressions bearing the appropriate lexical features.

9. In Einarssón (1949), there are examples of nounless adjectives of this type. (i) is a typical example.

(i) Tver kerlinger voru að tala saman. Þa segir sú eldri ...
Two old.women were conversing together. Then says the^{DEM} elder
'Two old women were talking. Then the older one says..'

10. An index is, in addition, part of the syntactic representation of an argument, but this is merely determinative of the syntactic environment the argument bearing the index occurs in. The semantic import of the index is its assignment capacity.

11. It may be that assigning these roles as a matter of grammatical theory rather than one of a theory of mind will have the effect of making the present theory too powerful. I present these assignments as conditions on interpretation, but the notion at least of origin of a speech phenomena is more primitive than what is needed for comprehension. One cannot imagine any bit of linguistic behavior that does not trigger the postulation that it has an origin. On hearing a voice from an unseen person, one presumes a nearby location to contain the speaker; hearing what one knows to be an echo, hearing what knows to be a recorded voice, one presumes a speaker. Take the case even of audible thoughts, a schizophrenic postulates another being as the source of the phenomena; one who carries on inner dialogue has expressly put himself as the origin. Telepathy might be the one case that could force us to decide.

12. John Perry's situation semantics (1979) "The problem of essential indexicals" ***Nous***

13:3-21, is one example, and in Kaplan (1979) situations or possible worlds are defined with respect to a complex containing such features.

13. See for instance, see Enç, Mürvet. (1987). The term "anchor" in my Function T is a wholesale adoption of her terminology.

14. I take the definition of what constitutes the boundaries of a discourse to be pragmatically determined. Most speakers consider a discourse to be closed if the participants part company for a length of time, though the topic may be picked up upon renewing company. It seems that this boundary between topic and discourse must be learned because children violate until it quite late. Take for example, a child involved in a discourse in which "Thurmond Munson is a great hitter!" is uttered. Several days later, the same child, on encountering his sometime conversational partner again may utter "His RBI is actually not that high, you know". For the child the discourse is still open. An adult would typically reintroduce the topic via a new context. He would not, in that instance, expect his addressee to know the referential assignment of "his". My thanks to Harriet Taber and Bob Fiengo for discussion on the significance of this observation. For some discussion on the acquisition of discourse boundaries, see Annette Karmiloff-Smith (1992)

15. The performance involved in writing or in reading is similarly tailored to these intrinsically contextual indicators.

16. These needn't be referential expressions. One can reproduce the de dicto puzzles with other content-bearing expressions, such as adjectives or verbs. For example, *Ansel believes Ms Ardois is wearing a mauve scarf* could be true, and Ansel rational at the same time that *Ansel believes the greenish-grey scarf is Ms Ardois's.* is true, (given the same scarf) only under the circumstances that Ansel believes that mauve is a greenish-grey color. The capacity for granting rationality in these and similar lexical disparities between speakers and their interlocutors is in principle limitless and dependent on inter-language negotiations. My knowledge of your vocabulary and use guides the extent to which I am willing or able to grant you the charity of substituting your valuations for mine.

17. In (17) through (19) the order is MMA followed by the ungrounded (the gender-bearing) pronoun. When the order is reversed the result is much worse.

(i) ?* Jón$_1$ sagði að Maria hefði sagt honum$_1$ að Pétur hataði sig$_1$
(ii) ?* Jón$_1$ sagði að hann$_1$ minnti að Pétur hataði sig$_1$
(iii) ?* Jón$_1$ segir að systir hans$_1$ hati sig$_1$

This difference is plausibly explained as a processing difficulty. Mixing at all is a little unnatural, according to Thráinsson (pc). If MMA expressions trigger context-queuing and ungrounded pronouns do not, then in an embedded clause where the first instance of

an index did not trigger context queuing, the valuation could proceed without queuing the context, but the second occurrence of that index would force re-analysis because it would force context-queuing.

18. This assumption does not follow directly from the UC Hypothesis and in fact, there is reason to treat it as a tendency, rather than a rule, given the status of expressions interpreted *de dicto*. These expressions, by my analysis, are uttered by the speaker, but are not given utterance context valuation. On the contrary, they are valuated only with respect to the queued context.

19. See Chomsky 1973 for an early exposition.

20. At least subject-controlled PRO. See Chierchia (1989) and Jacobson (1992) and Kaplan (1969) for different varieties of this view. See Reinhart (1990) for a deflationary view of Chierchia's central data.

21. The corollary of the PRO Theorem, that PRO is ungoverned depends on the "contradictory" definition of PRO – both pronominal and anaphoric. The ungoverned nature of arbitrary PRO is a mystery, since it is not anaphoric.

22. My thanks to Bob Fiengo for suggesting this solution to the problem of arbitrary reference for PRO.

23. I don't intend for this to include wh-traces, even though the argument position is phonologically empty. Presumably, the set of features which show up in the position that the trace is bound to define the lexical restrictions on the trace.

24. In order to deal with quantified sentences, the valuation would have to proceed via a set of sequences that differ from δ only in what they assign to the index 1 -the patients in the context.

25. All terms in a queued context are potential non-utterance assignees, even if they are uttered. Such arguments are prohibited from utterance assignments. Sentences with *de dicto* readings, it will be recalled, are cases where uttered expressions are assigned no features with respect to the utterance context.

26. See Reichenbach (1947), Enç, Mürvet (1987), Nunberg (1993), or Parsons(1990)

27. This notion has been very popular recently among many linguists including Chomsky (1995) and in the very brief remarks on anaphora in other more recent minimalist publications of his. The first postulation of this idea was actually pre-minimalist, occurring in *Knowledge of Language* (1986*a*). See also Reinhart and Reuland (1993) and Katada (1991). Kayne (2003) proposes, even more radically, that both

anaphors and pronouns (in some instances) move to adjoin their antecedents. Hestvik (1992) defends the idea that pronouns also move at LF, on the grounds that if anaphors move, the null hypothesis is that pronouns do, too.

28. Other third person expressions are more restricted still, depending on their lexical properties viz descriptions, names or quantifiers.

29. As a methodological note, it should be pointed out that the *non de se* interpretation does not **require** the agent's ignorance in order to go through. This scenario is constructed merely as a test to distinguish it from the *de se* interpretation which requires the relevant knowledge on the part of the agent.

30. See (1975) "Logic and Conversation" in *Syntax and Semantics* 3, Pages 41-48 for the most explicit construction of the principles that guide a speaker's choices.

31. The restriction, known in the literature as "obviation" is reported as a prohibition on co-reference, as a Principle B violation of some sort.

32. I take it as a good indication that the sentence is *non de se*, if the joke goes through. Jokes often rely on thwarting some pragmatic norm. In the case of *non de se*, the jockey unwittingly thwarts the norm of referring to one self in the first person. The speaker's humor can only turn on that pragmatic aberrance by using the *non de se* sentence.

33. Nominative MMA in Kannada in this configuration are ungrammatical if the agreement is not first person.

34. Kannada does not make the subjunctive/indicative difference in its morphology

35. In Icelandic, an unground pronoun in any position in an infinitive clause co-indexed to the matrix subject yields only a *non de se* interpretation. To date, I have not found a satisfactory explanation for this behavior.

36. Picallo (1985) also claims that tense in subjunctive clauses is absent. This is part of her account of the obviation effects seen in the apparent prohibition on the binding of nominative pronouns in subordinate subjunctive clauses.

37. It exists in Romance, (See Picallo (1985)) in Germanic (See Progovac, (1993), Hollebrandse, (2000)) and Scandinavian languages (See Anderson (1986), and Turkish (See Tosun (1999)

38. See Ogihara (1995), about English fake tense. Since (i) is a grammatical sentence, even though there is a difference in tense morphology between the two clauses.
(i) John said that Mary is sick

it may be that tense-agreement in English accomplishes what subjunctive accomplishes in other languages. In a theory that relates "fake tense" to *de se* interpretation, Ogihara (1995) argues that tense in subordinate clauses exhibiting the sequence of tense phenomena are semantically empty. He derives a *de se* analysis of complement clauses of this type by a syntactic operation which deletes the lower tense. His view of the *de se* interpretation is, however, different in some crucial ways from my understanding. Chiefly, the phenomena is treated as a property of the clause, rather than of particular arguments. But, as we saw with both English and Icelandic examples, a single clause may contain a mixture of *de se* and *non de se* pronouns.

39. Infinitive subordinate clauses, which are also hospitable to MMA, occur in a subset of those seen for subjunctives: purpose clauses and tenseless versions of the að clauses. I will therefore consider subjunctives and infinitives to be of the same class, the non-indicative class.

40. There are mono-clausal subjunctives, but I will ignore them since there can be no question of dependence between clauses, and thus no question of non-clause-bounded reflexives. These subjunctives are extended uses of the imperative, suggestions, exhortations and the like.

41. This includes clauses headed by other complementizers such as *hver* (who). "að-clause subjunctives" is just the name used in Einarsson for the subjunctive clauses that a certain class of verb subcategorize for.

42. The other possibility is that turning f_T off automatically turns f_O on. However, this is too strong since according to von Fintel (1998) , subjunctive tense is "fake" even in subjunctive if-then sentences. There is no good reason to treat such clauses as involving a change in intensional agent, thus no reason to suppose that the f_0 factor is changed from the utterance context. In other words, the conclusion that a context with utterance context f_T off is necessarily a context with a non-utterance f_O on is unwarranted.

43. For generic statements, one could hold that their genericity consists in a universal time assignment. E.g., The sentence "Mules are genderless" would be interpreted as [For all times ***t***, Mules are genderless at ***t***].

44. See Sells, Peter (1987), Siggursson, Halldór (1990)

45. Zribi-Hertz, A. (1989)

46. For some discussion on tense conventions with respect to character development , see Ursula K. Le Guin (2004)

The Jamaican ladies never approved of my mother, "because she pretty like pretty self' Christophine said.

From *The Wide Saragasso Sea* by Jean Rhys

Fit the Second
The Bellman's Speech

The Bellman himself they all praised to the skies –
Such a carriage, such ease and such grace!
Such solemnity, too! One could see he was wise,
The moment one looked in his face!

He had brought a large map representing the sea,
Without the least vestige of land:
And the crew were much pleased when they found it to be
A map they could all understand.

"What's the good of Mercator's North Poles and Equators,
Tropics, Zones and Meridian Lines?"
So the Bellman would cry: and the crew would reply
"They are merely conventional signs!"

From *The Hunting of the Snark, an Agony in Eight Fits* by Lewis Carroll

Chapter Three

Introduction

The study of contextually determined arguments -- pronouns, reflexives and reciprocals -- has led to interesting restrictions in syntactic theory. Theories of grammatical structure, properties of case-government in interaction with a typology of these elements resulted in the development of Binding Theory and its corollary, the PRO Theorem (Chomsky (1981). As the survey of grammars covered in the linguistics literature expanded, it became evident that the ever more evolved versions of Binding Theory, such as the account in *Knowledge of Language*, Chapter 3.5 (Chomsky 1986*a*), could not predict the MMA dependencies called "long-distance anaphora" which are observable in languages as diverse as Japanese, Malayalam, Russian and Icelandic. These data force the theory to decide among several possibilities. In part, the problem was subsequently inherited by Parametric Theory. That is, some researchers concluded that since a theory which predicts the domains in which Binding Theory operates in one grammar cannot predict the binding domains in another, it must be that grammars can vary with respect to these domains .Wexler and Manzini (1987), among others, defend this approach. The work of this type of theory, then, becomes how to formulate a Parametric Theory such that differing domains are predicted which are consonant with learnable grammatical properties. Linguists have also been moved by two other possibilities. One which opens a host of possibilities on its own, is that the whole approach to binding was wrong to begin with. For example, in the HPSG (Sag and

Pollard (1987)) theory of grammar, Binding Theory is driven not so much by structural properties as by a theory of hierarchy among thematic roles. Sag and Pollard (1987) did not present this material specifically in response to long-distance MMA, though this approach has inspired the long-distance MMA theories of Kiss (1991) and Benedicto (1991), among others. The second possibility, which again, has many forms, is that the long-distance dependencies are determined, not by Binding Theory, but by some other component of the grammar (see, for example Koster and Reuland (eds) (1991) and the articles therein, some of which defend this view). This chapter presents a review of linguistic theory that concerns itself with Binding Theory in general, and MMA in particular. These can be split into two basic camps: structural accounts and semantic accounts. Influential exemplars from within each are introduced for the purposes of comparison.

In Chapter Two, the distribution of long-distance and logophoric MMA was treated. The behavior of locally bound MMA, in the small class of so-called "inherently reflexive" predicates such as raka (to shave), greiða (to comb) was accounted for in a rather non-standard way. My account analyzes all mono-morphemic pronouns as being subject to Principle B, which predicts their unacceptability in examples like (1) and (2).

(1) * Olaf$_1$ benti á hann$_1$

Olaf pointed at him

(2) * Olaf$_1$ benti á sig$_1$

Olaf pointed at self

And while that categorization correctly blocks non-ground mono-morphemic pronouns

from binding in the closed class of "inherently reflexive" predicates, as in (3), it incorrectly blocks ground mono-morphemic in these predicates. It does not predict the grammaticality of (4), (5) and (6) unless the non-standard morphological structure argued for in Chapter Two, Section 1 is assumed.

(3) * Pétur$_1$ rakar hann$_1$

Peter shaves him

(4) Pétur rakar sig

Peter shaves self

(5) Eg raka mig

I shave me

(6) Þú rakar þig

You shave you

These data as well as the ECM data pose problems in other theories which concern themselves with local binding effects. Section 1 reviews one such theory.

Section 1 Reinhart and Reuland

In current literature on Binding Theory, probably the most influential modern Binding Theory is Reinhart and Reuland (1993).(R&R hereafter) This is a theory which **does** predict the difference between (3) and (4) as a consequence of their version of Binding Theory. R&R promote the idea that Binding Theory is relevant to a narrow set of structures – those wherein a predicate is formed. This turns out to require some finesse. The needed set of definitions are those in (7) and (8) (italics are theirs).

(7) Definitions

a) The *syntactic predicate* of (a head) P is P, all its syntactic arguments and an external argument of P (subject).

The syntactic arguments of P are the projections assigned theta-role or Case by P.

b) The *semantic predicate* of P is P and all its arguments at the relevant semantic level.

c) A predicate is *reflexive* iff two of its arguments are coïndexed.

d) A predicate (of P) is *reflexive-marked* iff either P is lexically reflexive or one of P's arguments is a SELF-anaphor.

(8) Reflexivity Conditions

A: A reflexive-marked syntactic predicate is reflexive.

B: A reflexive semantic predicate is reflexive-marked.

Condition A is a condition on predicates that are reflexive-marked, thus it speaks to the distribution of reflexive-markers. By Definition (d), SELF-anaphors (the bi-morphemic anaphors) are reflexive-markers. Thus Condition A requires that reflexive-markers appear in reflexive predicates. By Definition (c), a reflexive predicate is one that has two of its arguments co-indexed. Thus Condition A entails that SELF-anaphors which are predicate arguments must be co-indexed with a co-argument. Condition B, in requiring that a semantic predicate be reflexive-marked, effectively rules out any co-indexing relation between co-arguments if nether is a SELF-anaphor, except lexically reflexive predicates. Thus pronouns and names are barred from appearing co-indexed with any co-argument but a SELF-anaphor, except lexically reflexive predicates.[1]

R&R not only lay out a theory of the distribution of anaphoric elements, they also provide an explanation of why natural languages cut the data the way they do. The reader will no doubt have noticed that the above definitions and conditions make no mention of binding at all. There is, consequently, no need for c-command; the asymmetry between a bound element and its binder is missing from R&R's theory of anaphora. Instead, they argue that the hierarchical effects stem from a much more general phenomena, one which also subsumes the ECP (Empty Category Principle, cf. Chomsky 1981). Harking back to an analysis of Chomsky (1973), anaphoric elements of certain types are grouped together as the kind of elements that can be classed as links in a referential chain. As in Chomsky (1973) R&R include reflexives and NP-traces in this category. They assume that this condition is the same condition that determines the distribution of wh- and quantifier traces, thus subsuming the ECP.

According to this account, SELF-anaphors and SE anaphors (the mono-morphemic anaphors) are referentially defective, thus they bear the feature [–R], while pronouns, along with names, are fully referential, and so bear the feature [+R]. The prerequisite for full referentiality in their system is stated in (9)

(9) An NP is +R iff it carries a full specification for ϕ-features and structural case

"Structural case" here refers to the declension paradigm of an noun. Since neither SELF anaphors nor SE anaphors appear in nominative case, both are considered to be [–R]. They point out that SE anaphors in addition bear neither number or gender features[2],

though in fact this does no work for the theory, since the lack of structural case totally determines the distribution of SE anaphors. Their assumption, based on Chomsky (1986*a*), is that for an NP to project an argument, it requires a full specification of ϕ-features, which in this system (though not in Chomsky (1986*a*)) is inclusive of structural case. Thus, pronouns and names, being [+R] elements, project arguments, while anaphors, being [–R] elements, do not. This definition is needed in order reach the central desideratum of the theory: to unite the conditions that prohibit binding of names (as well other expressions that fall under Principle C of Chomsky 1981) with those that prohibit the binding of pronouns, in other words, to state a single condition on binding. This condition, in turn, is meant to reduce the conditions A and B to a single condition on A-chains (argument chains). Doing this demands a rather radical understanding of the semantic nature of reflexives. (10), given their assumptions, is all that Binding Theory really needs.

(10) A maximal A-chain (α_1,..., α_n) has

a. exactly one link – α_1 which is both +R and marked for structural case

and

b. exactly one θ-marked link

R&R's position is that SELF anaphors mark the predicates they occur in; they "reflexivize" it. In so doing, they render the predicate intransitive. A lexically reflexive predicate (or intrinsically reflexive predicate, such as raka (to shave)) is also reflexivized.

In Chomsky (1973) an NP-trace (of passive and raising constructions) was classified as [+anaphor]. R&R make the assimilation in the opposite direction; a SELF anaphor is a case-less link of a single discontinuous argument, just as an NP-trace is. As it is said on Pp 699:

> In fact, as mentioned in section 1, in Keenan's (e.g. 1987) analysis of reflexivization, SELF is an operator that turns a transitive predicate into an intransitive one, that is, it reduces the predicate's grid in just the same way that the intrinsic reflexive operator does. (Roughly, Lucie praised herself is analyzed as **(R(praise)) (Lucie)** which is equivalent, by definition to **Lucie (λx (x praised x))** .). On this view, reflexive marking means that a role-reducing operator is active in the predicate. With this assumed, as long as the predicate is reflexive-marked, co-indexing its syntactic arguments yields a chain that satisfies (10b), and if it also satisfies the R requirement in (10a), the result is a well-formed chain.

It is crucial that R&R drop (10b) in order to accommodate ECM and small-clause data.[3] Following Fox (1993), they reduce the condition on A-chains even further – such that (10b) is dropped. The Chain Condition adopted is stated below.[4]

Chain Condition

A maximal A-chain $(\alpha_1,..., \alpha_n)$ contains exactly one link - α_1 - which is +R.

One further caveat is needed so that the domain is correctly restricted, something which defines that which Chomsky (1981) captured via the notion of the governing category. R&R, therefore, have A-chains defined as "one argument in a syntactic, rather than a semantic sense". What this means is that if an expression is a member of a *syntactic*

predicate, as defined in (7a), it may form a chain with more than one semantic argument.

Now, given this definition of an A-chain, R&R can rule out a sentence like (11), while allowing (12).

(11) * Max_1 expects [him_1 to pass the test]

(12) Max_1 expects [$himself_1$ to pass the test]

The matrix subject and the subordinate subject form a syntactic predicate, since expect assigns case to both. Thus, there is an A-chain formed. coïndexation that forms an A-chain must satisfy the chain-condition. (11) violates the Chain Condition because there are two links that are +R. (12) conforms to the Chain Condition because only the matrix subject is +R. The predicate in the subordinate clause is also reflexive- marked in (12), by the operation of the SELF-anaphor. This should be a violation of Condition A, however, R&R assume that these types of predicates are really instances of complex predicate formation. The Dutch data suggest that this mechanism is in operation. In the above case, the predicate is [to-pass-expect]. Given complex-predicate formation, (12) at LF is the structure seen in (12').

(12') Max [to-pass-expect$_i$]$_j$ [himself t_j the exam]

Thus the complex-predicate is reflexivized. This means that for both predicates marked

by the SELF-anaphor, the Chain Condition is met.[5]

Recall that anaphors are case-defective and so do not count as +R bearers regardless of the actual case assigned to the particular syntactic position they occur in. In a vanilla predicate of the type seen in (13) and (14), a single predicate is formed. Thus only one A-chain is formed.

(13) Max_1 criticized $himself_1$

(14) * Max_1 criticized him_1

(13) conforms to the Chain Condition, while (14) does not, in that the former has an A-chain with one +R link, while the latter has two. A sentence like (15) is allowed because there two independent A-chains – because two syntactic predicates – so no A-chain is formed between the co-indexed arguments.

(15) $Lucie_i$ said that the queen invited her_1 to tea

In (16), however, we get a violation of the Chain Condition.

(16) *$Lucie_1$ said that the queen invited $herself_1$ to tea

Here, there are two distinct A-chains of α_1, (Lucie and herself) but the second one bears not even one cased element, thus, since there is no +R member of the lower A-chain, it

violates the Chain Condition.

These definitions and machinery would perhaps have been of little moment in the area of anaphors research if the theory had yielded no more than the distributional cuts seen in (11) - (16). After all, these facts were captured in Chomsky (1981). There are two new types of facts that fall out of this account, however. The first concerns the behavior of expressions that appear in positions that are not traditional predicate arguments, the second concerns the behavior of SE anaphors (the mono-morphemic anaphors). Their approach is novel in several ways. It narrows down the set of structures relevant to Binding Theory to those wherein a predicate is formed. The principles of Binding Theory are shown to be insensitive to occurrences of pronouns and reflexives that are not part of a predicate. As we have seen, there's some play in the definition, since they distinguish syntactic predicates from semantic predicates. Reflexive arguments that fall outside of the definition of predicate are interpreted as "logophoric".[6] R&R's insight is that the complementarity of pronouns and reflexives exists only in argument positions. Elsewhere, there is overlap, as the following sentences show.

(17) Jan_1 saw a snake near him_1

(18) Jan_1 saw a snake near himself_1

(19) The queen invited Lucie and me to tea

(20) The queen invited Lucie and myself to tea

In (17) and (18), although there is a semantic predicate formed by the locational

preposition and its argument, the PP does not form a syntactic predicate, since it has no external argument. Thus Binding Theory has nothing to say about either, therefore both are allowed. Once non-argument positions (arguments that are not part of a chain) are taken out of the operational arena of Binding Theory, pairs like (19) and (20) are non-problematic. The pair below is explicable in terms of chain-conformance as well.

(21) *Lucie$_i$ believes that we should elect herself$_i$.

(22) Lucie$_i$ believes that we should elect Max and herself$_i$

Once again, the anaphors that are not part of a chain in the above examples are determined to be logophors, rather than wild ungoverned creatures.[7]

There is a remaining puzzle about bound local anaphora that is not treated by the Chain Condition: the contrast between the two types of anaphors. View the pair below as representative.

(23) Olaf$_1$ hló að sjalfum sér$_1$

Olaf laughed at himself

(24) * Olaf$_1$ hló að sér$_1$

Olaf laughed at self

With respect to structural case, SE and SELF-anaphors are alike. Thus both are –R, but only the latter have the capacity to reflexivize a predicate. Both SE anaphors and

pronouns lack the reflexivizing function. Thus in R&R's analysis, SE anaphors and pronouns fall together as against SELF anaphors in this respect. Condition B, but not the Chain Condition rules (24) because the predicate is reflexive by the identity of its co-arguments, but it fails to be reflexive-marked. In inherently reflexive predicates, where the predicate is lexically reflexivized,[8] both types of anaphors can appear.

(25) Pétur$_1$ rakar sig$_1$ / sjalafan sig$_1$

Peter shaves self / himself

Since the predicate is lexically reflexive-marked, the Reflexive Conditions (Conditions A and B) are met. The Chain Condition also allows either choice, since either way, only one link in the chain is +R. The Chain Condition and the Reflexive Conditions, however make different predications about (3).

(3) * Pétur$_1$ rakar hann$_1$

Peter shaves him

The Chain Condition correctly rules (3) out in view of the fact that the tail of the chain is +R, just as the head (the subject argument) is. In contrast, the Reflexive Conditions alone incorrectly allow a pronoun to be bound in this environment because the predicate is lexically reflexive marked, thus licensing the co-indexation.

Presumably, the reflexivizing function of the SELF anaphor is redundant in the

environment of lexically reflexive predicates. As was noted in Chapter One, using the bi-morphemic anaphor in contexts where the mono-morphemic one is also grammatical comes with emphatic force. The predicted redundancy could perhaps be used to explain the emphatic effect. However, there is a similar emphatic/neutral force at play in ECM examples like the following.

(26) $Jón_1$ telur sig_1 / ⇑ sjálfan sig_1 vera skrýtinn

Jón believes self/ self-self to-be crazy

Since neither the matrix nor lower predicate is lexically reflexive marked, the emphatic effect cannot be the result of two operations of reflexivizing. The basic distribution is predicted, however. This is the case that the Chain Condition was invented for, because the two Reflexive Conditions won't really capture it. The logic using the two principles works like this. The syntactic predicate formed by the two case assignees of the verb telur (matrix and subordinate subjects) is reflexive because the two co-arguments are co-indexed. It is also reflexive-marked when the SELF anaphor is used, thus bi-morphemic anaphor is correctly allowed. Equally, a bound pronoun would be correctly ruled out, because pronouns do not have the reflexivizing function. But SE anaphors also do not have this function, yet they are grammatical in these structures. Under the roof of the Chain Condition, however, the ECM data is covered. The syntactic predicate has two links, if the tail of the chain is +R, it is in violation, if the tail is –R, it is in compliance. Thus the two anaphors, being –R, are in, while a pronoun, being +R is out.

The only residue from the Chain Condition then, involves SE anaphors in local predicates that are not lexically reflexive. The pair in (25), repeated below showed that inherently reflexive predicates are hospitable to both types of anaphors.

(25) Pétur$_1$ rakar sig$_1$ / sjalafan sig$_1$

Peter shaves self / himself

Given the Chain Condition, this is expected; there is exactly one +R element in the chain for either case. This logic will do nothing in explaining the ungrammaticality of the mono-morphemic anaphor in the open class of predicates, of the type seen in (24), repeated below.

(24) * Olaf$_1$ hló að sér$_1$

Olaf laughed at self

The Reflexive Conditions, it will be recalled, were needed here. The predicate is not reflexively marked, as required by Condition B, since SE anaphors in R&R's account do not have this capacity. By the Chain Condition, (24) is fine: there is a single +R link in the A-chain. These data taken together show that both the Reflexive Conditions and the Chain Condition are needed.

There is still some seepage, however with respect to the class of data that both the Reflexive Conditions and the Chain Condition are purported to cover: the tiny closed

class of inherently reflexive predicates. The problem persists in ECM structures as well. Referring expressions in first or second person in these environments do not behave as expected. In inherently reflexive predicates, first and second person pronouns can occur bound, as was shown in (5) and (6), repeated below:

(5) Eg_1 raka mig_1

I shave me

(6) $Þú_1$ rakar $þig_1$

You shave you

Once again, the two mechanisms discussed in R&R yield conflicting results. According to the Chain Condition (5) and (6) should be starred because the head and the tail of the A-chain are both +R. By the Reflexive Conditions though, these cases are correctly predicted to be grammatical. Since the two arguments are co-indexed, the predicate is reflexive. The Reflexive Conditions merely require that the predicate be reflexively marked, and as raka (shave) is lexically reflexive, the predicates in (5) and (6) are reflexive-marked. As was noted above, the Reflexive Conditions alone would not be able to rule out a bound pronoun this environment. Once the predicate is reflexivized, any pair of co-indexed arguments is predicted to be grammatical. Thus (3) (repeated below) would be predicted to be grammatical by the Reflexive Conditions.

(3) * $Pétur_1$ rakar $hann_1$

Peter shaves him

The situation here is salvaged by the Chain Condition. Although (3) conforms to the Reflexive Conditions, it violates the Chain Condition in having two +R links. Perhaps the theory could split the conditions to go one way for the 3rd person expressions and another for 1st and 2nd person pronouns – Reflexive Conditions for 1st and 2nd person, and Chain Condition for 3rd person, with SE anaphors requiring both (24 vs. 26). But, as we have seen, the Chain Condition is needed for ECM structures. The Reflexive Conditions would incorrectly filter out bound 1st and 2nd person pronouns in sentences like the following.

(27) $Ég_1$ tel mig_1 vera skrýtinn

I believe me to be strange

(28) $Þú_1$ telur $þig_1$ vera skrýtinn.

You believe you to be strange

The predicate formed by the matrix verb and its two case assignees is reflexive in virtue of the co-indexing relation. It is not reflexive-marked, being neither lexically reflexive, nor reflexivized by a SELF anaphor. Therefore, both (27) and (28) violate the Reflexive Conditions. Worse yet, the Chain Condition also rules them out. The Chain Condition forbids more than one +R link in an A-chain.

Now, by the definition given for argument projection, and thus +R status, SE anaphors and SELF anaphors are ruled out on the grounds of defective case. The

definition, repeated below, requires structural case.

(9) An NP is +R iff it carries a full specification for ϕ-features and structural case

There is a full case paradigm for all pronouns – 1st and 2nd person, as well as third. This means that the subordinate subjects in (27) and (28) are counted as +R, which would render the A-chains invalid by the Chain Condition. The Chain Condition is not good for bound 1st and 2nd person pronouns in any environment, because by the same reasoning, the sentences which were correctly allowed in by the Reflexive Conditions because of the lexical reflexivization seen in examples like (5) and (6) would be ruled out.

In dealing with anaphors of the two types versus 3rd person pronouns, it was shown that R&R's Chain Condition would cover all of the cases except for SE anaphors locally bound in the open class of predicates – those that are not lexically reflexive. It will be recalled that these sentences (such as (24)) are ungrammatical, yet would be allowed by the Chain Condition, since SE anaphors being case defective, contribute no +R links to the A-chain. In all other cases, the Chain Condition held. So while R&R's theory cannot reduce all the phenomena to a single condition, perhaps one can salvage the situation by keeping the Reflexive Conditions for the open-class set of predicates, and making a slight adjustment to the assumptions about what counts as +R in order to account for the recalcitrant first and second person pronoun data. It could be claimed that in fact 1st and 2nd person pronouns do not meet the criteria in (9) because they lack gender features. This would render them –R and in this way, predict their grammaticality when

bound in ECM structures, as well as in lexically reflexive predicates. This move is attractive until one notices the leak in the open class set of mono-clausal predicates that it entails. One would no longer be able to predict the ungrammaticality of examples like these:

(29) * $Ég_1$ benti á mig_1
I pointed at me

(30) * $Þú_1$ bentir á $þig_1$
You pointed at you

(31) * Eg_1 hló að $mér_1$
I laughed at me

(32) * $Þú_1$ hlóst að $þér_1$
You laughed at you

because the tail of the A-chains on this reasoning are –R because they bear no gender features. The Chain Condition would incorrectly allow (29) - (32). In fact, an occurrence of a 1st or 2nd person pronoun that is not bound would fall afoul of the Chain Condition in just the way an unbound anaphor would, since there would be no +R link in such singleton A-chains. It is unlikely, in any event, that R&R really want to have the "full specification for ϕ-features" part of the definition for projecting an argument, the claim that they are merely adapting Chomsky's (1983) definition notwithstanding. All of the work of the status + or –R is done by the notion of structural case, for one thing. For another, were one to seriously adopt (9), to the extent of ruling out expressions that show no gender, one runs into the problems rehearsed above with respect to 1st and 2nd pronouns. Even within the 3rd person paradigm, requiring an expression to show gender

features in order to project an argument would bar from referential status expressions like who, hver, someone, einhver, and quantifiers in general. If the Chain Condition is really going to do work as both Principle C and Principle B of the standard Binding Theory, such a move is undesirable in that it would fail to rule out strong crossover cases, such as the following.

(33) * He_1 hit $everyone_1$

(34) * $Hann_1$ barði $einhver_1$
He hit someone

(35) * Who_1 did he_1 hit e_1

(36) * $Hver_1$ barði $hann_1$ e_1
Who hit him e

These considerations reduce the criteria in (9) to (37).

(37) An NP is +R iff it carries structural case

(37) in turn rests solely on the lack of nominative case for anaphors.[9]

Returning to R&R's insight about logophors, it will be recalled that we should expect to find them in positions that do not constitute arguments of a predicate. This very elegantly resolves the otherwise mysterious occurrence of unbound anaphors of the type seen in (38), as well as those that are bound outside of the predicate domain of the antecedent, as in (39).

(38) The queen invited Lucie and myself to tea

(39) Lucie$_i$ believes that we should elect Max and herself$_i$

In predicate structures, Binding Theory legislates the form co-indexing can take. Given R&R's attention to predicate structure, there are many environments in which Binding Theory has nothing to say. What their insight teaches us is that where either a pronoun or a reflexive can occur, there is a logophoric versus non-logophoric tension. The pair below exhibits a difference in view-point typical of logophoric/non-logophoric splits.

(40) Jan$_1$ saw a snake near himself$_1$

(41) Jan$_1$ saw a snake near him$_1$

Presumably, the SELF part of the anaphor in these constructions do not perform any reflexivizing function[10]. In R&R's view, reflexive predicates are single-argument predicates; the reflexive expression does not refer. Logophoric anaphors behave differently, so it would seem that they, unlike their Binding-Theoretic counterparts, do refer. Puzzlingly, R&R say they do not. On Pp 673, it is said

> unlike pronouns, they cannot be used to directly select an entity in the discourse. Hence, even a logophor can be most easily used with some sort of linguistic entity in the sentence. The peculiar property of perspective logophors is that they seem able to refer directly to the center of communication or consciousness. Nevertheless, even this use is easier when the center is mentioned already as an antecedent in the sentence; that is with third person logophors. A logophor, however does not have to be bound by its antecedent (though it may be). Their relation may be that of coreference, and not necessarily that of

variable binding.

The point of using feature specifications, is that their value is either + or –. There is no range along which terms like "easier" have formal descriptive power. Moreover, the points made in the above quote should lead, it seems to me, to the conclusion that logophors are referential, and therefore +R. The theory risks losing the benefit it gains from restricting Binding Theory to predicate arguments if it does not make a formal distinction between logophors and non-logophors. For these reasons, making sense of the feature specification of SELF anaphors, the feature –R will have to be applicable only in syntactic predicates, and elsewhere, they are +logophor. As far as this goes, this seems to me to work fine.

The situation is a little more complicated when it comes to SE anaphors, however. In clause-internal cases, SE anaphors can occur either in argument position in lexically reflexive predicates (cf example (25)) or in predicates that do not meet the definition of a syntactic predicate, like the Dutch sentence in (42), R&R's (17c).

(42) Max_1 legt het boek achter zich_1

Max put the book behind self

The former, being legislated by Binding Theory, is then, a non-logophoric instance, and –R, while the latter is a non-Binding Theoretic occurrence on a par with (40). The SE anaphor in (42) is +logophoric, just as the SELF anaphor in (40) is. It is difficult to know

exactly what position R&R take with respect to SE anaphors that are non-clause bound however. R&R's descriptive use of the term "logophor" includes a type they call "perspective logophor". This term is apt for the above case, as well as the long-distance case.

> A very common context facilitating the choice of a logophor is that of point of view or consciousness report.

This description is accurate – Chapter Two of the present work is at pains to show that MMA are inherently "perspectival" in this sense. However, logophoricity for the long-distance cases does not fall out of its relation to a predicate, as in (40) and (42). That is, the long-distance cases seem to be both anaphoric and logophoric, although R&R do not state the situation like that. There are two ways to understand R&R's varying proposals about long-distance MMA. Consider (43).

(43) Jon_1 telur að María_2 hafi svikið sig_1

Jón believes that Maria has^{SBJ} betrayed self

In (43), there is no A-chain formed between Jón and sig, because there is no syntactic predicate containing them; there are merely two separate A-chains, two separate arguments. Now, if sig is –R it violates the chain condition because there has to be a +R member. So, it must be a logophor, (and thus +R) but on what grounds can this feature be assumed? The position sig occupies is fully a predicate argument, so logophoricity cannot be assigned on the same basis as with (40) and (42).

However, elsewhere in the article, R&R have it that a SE anaphor is moved to Infl, it picks up the ϕ-features there, and that this makes the trace of the SE anaphor visible, therefore referential.[11] The chain, headed by the SE+Infl complex is +R, and the tail, the trace is –R. In this way, there is a single chain, which is Chain Condition compliant. But, of course, this does not predict the logophoricity of the chain.

One of the mechanisms proposed in R&R's 1993 article is that both types of referentially defective nominal expression – the anaphors – undergo movement. SELF anaphor movement adjoins them to VP in order to reflexivize the predicate, and SE anaphor movement adjoins them to I^0 which enables them to pick up ϕ-features. Though the idea is not greatly fleshed out in the article, the (putative) subject-orientation of SE anaphors is predicted to follow from this movement because the features they pick up are in Infl, which agrees with SPEC-IP, the subject. In Reinhart and Reuland (1991), the motivations for the movement analysis of SE-anaphors are more fully laid out. This article explores the idea that the antecedence conditions are local, given independently motivated movement of MMA. As this general strategy is adopted by many other theorists of long-distance MMA, the next section provides a general synthesis of the movement-theory style of analysis.

Section 2 Structural Accounts of Long-distance MMA

Beginning with theories that separate MMA from logophors, in which MMAs are classed as a kind of reflexive and therefore require binding, the work of these theories is in defining the required binding domain. Any review of the literature on the topic has to

deal with theories of the type that start from the claim that the set of expressions Binding Theory holds of are divided into two basic classes: maximal phrases, or XPs and heads, or X^{O}s, where the X-bar status of an argument determines how its binding domain is defined. For these theorists, (Pica, 1987) (Yang, 1983) (Batistella, 1989) (Reinhart and Reuland, 1989, 1991, 1993) (Hestvik, 1990, 1992) (Progovac, 1992, 1993) (Cole and Sung, 1994) (Cole and Wang, 1996) to name but a few, the long-distance binding, as well as the (putative) subject-orientation of MMA (and the blocking effects seen for MMA in Chinese) follow from its X^{O} status.

There are both movement and non-movement varieties of this type of theory, but all start from the idea that the MMA are heads and that this is a property that they share with Agr. Across languages, the reasoning continues, Agr projects a full set of ϕ-features, while MMAs do not.[12] For some movement theories, MMA move to Agr to acquire ϕ-features, and in so doing, become associated with the subject argument, while for non-movement theories, Agr is actually the antecedent itself. Thus, for both, Agr is central to the definition of the domain for MMA. There is another class of movement theory in which MMAs move to Infl because that's just what X^{O} arguments do; as evinced by the placement of clitics.

Section 2.1 Movement Theories of MMA

There are several "movement theories" of MMA [13] which could account for the ungrammaticality of sentences like (1).

(1) * Petur_1 yrði glaður ef Þu hjalpaðir ser_1

Peter would-be glad if you help^{SBJ} self^{DAT}

The idea starts with the premise that an argument's capacity to be assigned reference is dependent upon some algorithm for matching identities to phonological matrices in θ-positions. The problem is that some arguments do not bear the features necessary for matching them to any identity. In effect, such arguments bear an index which must be made visible by some mechanism. This assumption and the mechanism proposed for establishing the required visibility are an outgrowth of the ECP[14]. In this account, since the mono-morphemic anaphor is considered to be an argument which is insufficiently determined by its phonological matrices, it is forced to move in order to pick up ϕ-features, and being an X^0, it can only pick them up from other X^0 elements. Agr, then, is the sole ϕ-bearing candidate which would qualify as a ϕ-donator, and only if the ϕ-features have the same index as sig can the visibility requirement be satisfied. The distributional properties of long-distance MMA are accounted for as following from the trail of the movement, while the antecedency conditions follow from the Spec-Head relation between subjects and verbal agreement, which the MMA becomes a part of via adjunction. Assuming Spec-Head agreement, this account easily predicts subject orientation of MMA. In (1), sig would cross a barrier in moving from the ef-clause to the matrix Agr, thus its ungrammaticality is predictable in this account.

(2) Jón$_1$ segir að Petur$_2$ yrði glaður ef Þu hjalpaðir ser$_{1/*2}$

Jon says that Peter would-be glad if you helped^{SBJ} self^{DAT}

The contrast between the two subject antecedents in (2), however, shows that this cannot be quite right[15]. The condition seems to be that the MMA must be within the complement of the verb of which its antecedent is the subject. This condition does not prohibit MMAs within adjunct clauses, just so long as the adjunct clause is embedded within a complement clause with an external subject antecedent. In addition, movement theories face a problem with examples such as (3), since the MMA is embedded within an island, yet it is grammatical, and in fact, MMA can occur within "stacked relatives".[16]

(3) Jón$_2$ segir að Ólafur$_1$ hafi ekki enn fundið vinnu sem ser$_2$ líki

Jón says that Ólafur has^{SBJ} not yet found a job which self likes^{SBJ}

On purely structural grounds, then, there are difficulties with the movement-theory style of MMA accounts.

Section 2.1.1 The Access to Agreement Motivation

A further problem with this account results from the motivation postulated for the movement: (i) MMA is referentially deficient (ii) it therefore requires access to verbal agreement features. This motivation relies on the (putative) generalization that MMA have subject arguments as antecedents. However, the existence of grammatical sentences

in which the antecedent of the mono-morphemic reflexive is a non-nominative subject poses a problem for this view. Consider, for example, the following sentences:

Accusative Subject

(4) Ég tel $Jens_1$ hafa sagt að þú hefðir svikið sig_1

I believe Jens to-have said that you have betrayed self

PRO Subject

(5) Þeir skipuðu $Önnu_2$ PRO_2 að segja að ég hefði svikið sig_2

They ordered Anne PRO to say that I have betrayed self

Dative Subject

The same verb form – third person singular agreement – is used with all dative subjects. Thus, for example, a first person singular dative subject as in (6) uses the same default agreement pattern as the third person plural dative subject in (7) with verbs like 'þykja' (to seem).

(6) Mér þotti að Jón hafi séð Petúr

To-me seemed that Jon had seen Peter

'I thought John saw Peter'

(7) þeim þotti að Jón hafi séð Petúr

To-them seemed that Jon had seen Peter

'They thought John saw Peter'

Thus, the agreement choice for the MMA in (8) is the same as it is in (9), although the

antecedents differ in number.

(8) Honum$_1$ þotti að Jón hafi séð sig$_1$
to-him seemed that Jon had seen self

(9) Þeim$_1$ þotti að Jón hafi séð sig$_1$
to-them seemed that Jon had seen self

In (9), the agreement with the dative subject is the so-called "default agreement", that is, third person singular. In this example, and others in which the verb assigns "quirky case" to its subject and thus uses the default agreement, it is hard to see how the referentiality of sig could depend on the features of Agr, since it has to be interpreted as identical to its antecedent, whose features in this case do not correspond to those of Agr. In (4) and (5), there is no agreement at all for sig to pick up. It seems then, that agreement cannot be an element which is necessary in determining the reference of the mono-morphemic anaphor.

These objections can be overcome by stating the condition somewhat differently. If it were supposed that the mere configuration of the Spec-Head relation of IPs is what satisfies the lack of ϕ-features, thus still motiving MMA to move to the head of IP, then subject-orientation could still be claimed to fall out of this movement. But if the content of the Infl head does not, in fact, matter, we should expect no difference between an Infl filled with active morphology and one filled with passive morphology. However, there is such a contrast, as the following pair shows:

(10) Olaf$_1$ bað um að Þú fengir að koma til sín$_1$

O laf asked for that you get^{SBJ} to come to self

'Olaf asked that you be allowed to visit him'

(11) * Olafur $_1$ var beðinn um að Þú hengir að koma til sín$_1$

Olafur was asked for that you get^{SBJ} to come to self

'Olaf was asked that you be allowed to visit him'

In addition, subjects of intensional nouns are also good antecedents, as we saw in Chapter Two. The examples below, for example, could not be accounted for via any relation between the antecedent and the matrix Infl, since the agreement configuration involves not the antecedent, but the intensional noun it is the agent of.

(12) Skoðun Jóns$_1$ er að þú hafir svikið sig$_1$

Opinion Jon's is that you have betrayed self

(13) Svar Jóns$_1$ var að Mary hefði séð sig$_1$

Answer Jon's was that Mary has seen self

(14) Vitnisburður Jóns$_1$ er að Mary hafi séð sig$_1$

Testimony Jon's is that Mary had seen self

If I^0-Agr could be correlated to something approximating D^0-Agr, such that possessive arguments and subject arguments are in the same relation to their respective Agrs, there is still a c-command problem to overcome in these cases. As (14) shows, sig does not c-command any of its traces.

(14)[$_{IP}$ [$_{DP}$ Vitnisburður [$_{D}$ Agr]sig$_1$] [$_{DP}$ Jóns]$_1$]$_2$ [$_{I}$ er t_1] [$_{CP}$ að Mary [$_{I}$ hafi t_1] séð t_1]]

Testimony D-Agr self Jon's is that Mary had seen

In the above structure, sig is safely ensconced in a SPEC-Head agreement configuration with its antecedent, thus satisfying the local antecedency condition. The problem is the trail of its movement. There is a failure of c-command right from the top, inasmuch as DP_2 (*Vitnisburður Jóns*, Jon's testimony) is the first maximal projection dominating sig, but DP_2 does not dominate the I^0 of the matrix IP (*er*, is), nor that of the subordinate I^0 (*hafi,* had), nor the argument position trace of sig.

Section 2.1.2 Subject Orientation Claims

There is a much more serious problem that results from the arrangement of the data that underwrites the motivation for movement, or for any type of access to verbal agreement. There is a factual problem. Virtually all theories of long-distance anaphors report that the antecedent must be a subject argument. My investigations have led me to see that MMA are better described as being agent-oriented. The following sentence illustrates this claim.

(15) Háttarlag Jóns sannfærði Mariu$_1$ að þú hefðir svikið sig$_1$

Behavior Jon's convinced Maria that you had^{SBJ} betrayed self

The empirical problems that result from the claim that MMA move to an X^0 in Spec-Head agreement with its antecedent are made evident by two kinds of data. First, is the non c-commanding data seen in (12) - (14). Second is the non-subject data seen in (15). The lack of overt ϕ-features in structures admitting of non-nominative antecedents, such as the examples seen in (4) - (9) presents a challenge to the motivation for the movement.

Section 2.1.3 Head-Movement, Clitic Climbing, or XP-Movement?

Even supposing that these issues could be ironed out of the movement theory approach to anaphora resolution, the fundamental assumptions on which it rests need looking into. The idea that MMA move to Infl comes from two kinds of observations: clitics, X^0 arguments par excellence, both reflexive and non-reflexive, appear overtly in Infl in Romance and many Slavic languages. It seems, in fact, that they cannot appear in argument position. In addition, there are some verbs which seem to be composed of the verb and an incorporated reflexive.[17] From these observations, it is an easy theoretical move to the position that clitics are at some level in argument position, and the level at which they are overt, they have moved to Infl. It is another small step to assume that MMA are clitics (or clitic-like) which are in argument position at one level and have moved to Infl at another, the only difference between them and clitics being the level at

which they move. The contrast could be analogized to that between the overt movement of WHs as against the procrastinated movement of quantifiers.

The big leap of theoretical faith comes, it seems to me, in going from the statement that X^0s move to Infl, to an X^0 moving out of the IP in which it occurs as an argument and into another IP, and in particular, as these theories would have it, to the IP in which its antecedent occurs. There are several issues raised by this last claim. Consider the structure in (16).

(16) [DP_1—$Infl_1$ ... [DP_2—$Infl_2$ ... [DP_3—$Infl_3$ ... $Refl_2$]]]

The question is, why would the reflexive, a moving out of $Infl_3$ move into $Infl_2$ and why wouldn't it continue moving to reach $Infl_1$. The logic of the theory requires that the answer be that the movement to $Infl_2$ and not beyond places the reflexive in a position to satisfy the binding condition for reflexives.[18] Here the analogy between clitics and reflexives splits to some degree because which Infl a clitic moves to in long movement is not restricted, whereas the particular Infl that an X^0 reflexive moves to is determined by the position of its antecedent. This is a strange result in that the motivation for the movement was supposed to be its clitic-like status.

As Thráinsson (1991) points out, MMA are good in environments that are inhospitable to WH-movement. The following contrast illustrates his point:

(17) Jon_1 segir að Maria trùi ekki þeirri fullyðingu að konan hafi svikið sig_1

Jon says that Maria believes not the claim that woman has^{SBJ} betrayed self

(18) * $Havern_1$ segir Jon að Maria trùi ekki þeirri fullyðingu að konan hafi svikið e_1

Who says Jon that Maria believes not the claim that woman has betrayed

'who does Jon say that Maria doesn't believe the claim that a woman has betrayed?'

It may be that head-movement is subject to different constraints than those which governs XP movement (exhibited in (18)). However, head-movement, if anything, seems more, not less constrained than WH-movement. The longest known movement of clitics, as discussed below, is subject to several restrictions, none of which seem to interact in any way with the properties limiting the occurrence of MMA. In addition to the very serious island problems already raised, there are some questions that arise from the comparison to clitic-movement.[19] The movement of clitics out of their clause occurs only in a certain class of infinitives in some languages; we will consider Italian here. First, there is never a lexical subject of the clause out of which the clitic moves, and second, the infinitives which allow this movement are either aspectuals, movement verbs or modals.[20]

There are probably as many theories of this phenomena known as clitic-climbing, as there are of non-clause-bound reflexives; among the theories put forth there is the idea that two clauses are somehow restructured to form a single clause according to a semantic principle, or that restructuring is a lexical property which some verbs in some languages have, that the subordinate clause is a VP or a something smaller than a CP[21]. Given the

right combination of verbs, clitic climbing appears to have considerable freedom of movement as (19) shows (Gulli, pc).

(19) Ho iniziatio a voler poter [far***lo***]

Ho iniziato a voler poter***lo*** [fare ***e***]

Ho iniziato a voler***lo*** [poter ***e*** [fare ***e***]]

H'***lo*** iniziato a [voler ***e*** [poter ***e*** [fare ***e***]]]

'I have begun to want to be able to do it'

The problems with movement theories of X^0 reflexives become evident when we compare the class of structures that the longest clitic-movement occurs in (like (19)) with those that allow X^0 reflexives. As (20) shows, even among infinitive clauses, overt subjects do not prohibit the occurrence of the X^0 reflexive.

(20) $Jón_1$ telur Maria hafa svikið sig_1

Jon believes Maria to.have betrayed self

Furthermore, even among infinitives with non-overt subjects, the restriction on the kind of infinitive that applies with respect to clitic-climbing (aspectual, motion and modal) does not hold with MMA.

(21) Dringinir$_1$ skipuðu forsetann$_2$ að PRO$_2$ segja Jens að PRO berja sig$_{1,2}$

The boys ordered the president to tell Jens to hit self

Section 2.2 Expanded Binding Domain

The theories discussed so far concentrate on the (putative) subject-orientation of MMA and rely on movement properties to account for the distribution and type of domains that allow the dependency. Another strategy entirely is to still consider an MMA as an anaphor, but to reconfigure the binding domain to accommodate for its long-distance behavior. Anderson (1983) proposes an expanded binding domain of the TSC type (cf Tensed-S Condition of Chomsky (1971)). This theory focuses on the type of clause that MMA occur in, rather than the syntactic position of the antecedent[22]. It will be recalled that long-distance MMA occur in infinitive and subjunctive clauses, but not indicatives. In accounting for this split, TSC-type theories note sequence of tense phenomena and postulate that non-indicative clauses are anaphoric in nature.[23] In Anderson (1983), a rule of tense agreement between matrix and subordinate tense is assumed. Tense agreement is to be understood as a matter of whether or not the semantic component includes an independent temporal expression in the subordinate clause. For a given subordinate clause, either the tense agreement rule (or tense copying) has applied, or the tense morpheme is read as generating an independent temporal point. When there is tense agreement, the governing category includes the whole sentence. Infinitive clauses never have a tense morpheme, so the tense agreement rule always applies. This predicts pronouns and MMA always differ in grammaticality when bound in infinitives. Leaving

aside subject (or agent) orientation facts, this prediction is borne out, as the following pair shows:[24]

(22) Þeir$_1$ skipuðu Önnu [að PRO kyssa sig$_1$]
they ordered Anne to kiss self(s)

(23) * Þeir$_1$ skipuðu Önnu [að PRO kyssa þa$_1$]
they ordered Anne to kiss them

To allow for the fact that there is no contrast in grammaticality between pronouns and MMA in subjunctive clauses, as the pair in (24) and (25) demonstrates, Anderson's (1983) account has it that the tense copying rule is optional in subjunctive clauses.

(24) Jón$_1$ telur [að ég hefði svikið sig$_1$]
Jón believes that I have^{SBJ} betrayed self

(25) Jón$_1$ telur [að ég hefði svikið hann$_1$]
Jón believes that I have^{SBJ} betrayed him

In (24), the tense copying rule has applied, yielding a single tense interpretation for the entire sentence. The application of this rule renders the governing category for sig to be the smallest S containing it and a tense operator – thus the whole sentence.

Consequently, it obeys Principle A because it is bound in that domain. In (25) the tense-copying rule has not applied. Thus the lower tense morpheme is not anaphoric; it establishes an independent temporal reference. Since the subordinate clause in (25) contains a tense operator, the governing category for hann is the lower clause. So (25) complies with Principle B inasmuch as the pronoun is free in its governing category.

This type of theory fairly elegantly catches the relevant data. It makes a fairly strong prediction, viz, that there is complementarity between pronouns and anaphors even out to the extremely large domains of multiply embedded clauses. A test for this prediction is to see whether a binding domain for an MMA can contain a licit domain for a pronoun. Maling (1984) provides this data as a counter-example to Anderson (1983).

(26)[Jón$_1$ taldi [að María$_2$ hefði sagt [að ég hefði skilað henni$_2$ bokunum sínum$_1$]]]
Jon believed that Maria had said that I had returned to.her books self's

By Anderson (1983), (26) ought to be ungrammatical. In order that the MMA sínum conform to Principle A, the tense-copying rule has to have applied to both of the embedded clauses. In this case, the entire sentence is its governing category. This has the undesired entailment, however, that the pronoun henni is bound in its governing category, the median clause-boundary in (26), since this same domain contains a c-commanding antecedent co-indexed with it, María. Since (26) is, in fact, grammatical, it cannot be a Principle B violation as Anderson's (1983) theory predicts. Additionally, in claiming that MMA are anaphors, subject to Principle A, Anderson's theory also fails to predict instances of MMA that are not C-commanded by their antecedents, thus data of the (12) -

(14) type go unexplained, irrespective of the tense-copying rule.

Progovac (1993) presents a theory that has aspects of both of the theory types thus far discussed. Like Anderson (1983), it extends the binding domain of MMA (which is classed as a reflexive) to account for its long-distance behavior, rather than having movement determine its domain. But like the movement theories, Progovac's (1993) theory ties the antecedency conditions of MMA to its status as an X^0–element, and the X^0–status of the Agr features of Infl. To extend the binding domain of MMA, Chomsky's (1981) definition is adapted, the domain being defined as that containing the reflexive, its governor and a SUBJECT. According to Progovac (1993), MMA, being dominated by both a maximal phrase, DP and a head, D^0, allows two choices for SUBJECT: an X^O or an XP. The X^O head of Infl, Agr, counts as a SUBJECT and an XP specifier of a projection [DP, IP] or [DP, DP] also counts as a SUBJECT. So, suppose an XP SUBJECT is chosen. In this case, the binding domain is closed off at the first Specifier – [DP, IP] or [DP, DP] . Local binding always results, therefore, when an XP SUBJECT is taken.[25] But something further has to be said about the theoretical interpretation of SUBJECT in the long-distance cases where "SUBJECT" becomes to be synonymous with "possible antecedent".

The domain can be larger than the clause in which the MMA occurs because, in virtue of its status as an X^0–element, it ignores the subject of the clause in which it occurs as a possible SUBJECT and looks instead for an X^0. The Agr which fits this definition will always be the smallest indicative Agr. Infinitive clauses, containing no Agr–element are easily be extended in this fashion since they contain no possible X^0 SUBJECT for the

X^0 reflexives. As for subjunctive Agr, it is assumed that it is actually empty at LF. The reasoning is as follows: the tense in subjunctive Infl is dependent on the tense of the verb which assigns it subjunctive, its contents being just a copy of the dominating Infl, so subjunctive tense is not visible at LF. As for the Agr part of subjunctive Infl, after performing its task of assigning nominative case to its sister, it too deletes at LF.[26] This crucially cannot occur with indicative Agr, or the account collapses, since its is the indicative Agr, in being counted as SUBJECT, which extends the domain.

This account explores briefly why MMA in some languages occurs only in infinitive clauses, Russian, for example, while in others, like Icelandic, it occurs in both infinitive and subjunctive clauses. To explain the difference between the locality conditions for MMA in Russian versus Icelandic, the Russian subjunctive is shown to contain some non deletable material - modal morphology. Since this type of subjunctive, therefore contains a non-empty Infl, the subjunctive Agr becomes visible, thus closing off the domain. Icelandic subjunctives, containing no more than tense and Agreement, are empty at LF and thus do not constitute binding domains.

It doesn't seem to me that subject-orientation actually falls out of this account. It is, instead, a stipulation snuck into the interpretation of SUBJECT as possible antecedent. If the domain is defined as the smallest domain containing the reflexive, its governor and a SUBJECT and that SUBJECT is the minimal indicative Agr, then a sentence like the following is predicted to be good:

(27) * Eg sagði Jon_1 að þú hef svikið sig_1

I told Jon that you had betrayed self

But even if the theory is taken as it seems it is intended, that if an X^0 SUBJECT is chosen, the antecedent must be an X^0, the account, like the movement theories rehearsed above, predicts that there will be no grammatical indexing between X^0 reflexives and arguments that are not nominative, except locally. To illustrate how the local versus non-local distinction is made, observe an example like (28).

(28) Þa vanti bókina sína

$They^{ACC}$ lacks book selves's

A sentence of this type has a "quirky case" subject and therefore a default third-person-singular agreement on the verb. Such sentences are grammatical on this account because the reflexive may choose an XP as a SUBJECT. (29), by contrast, is explained by the fact that MMA also has X^0 status.

(29) $[_{IP}$ Jon_1 $sagði^{AGR}$ Mariu að $[_{IP}$ PRO berja $[_{DP}$ móður $sína_1]$]]

Jon told Maria to hit mother self's

The first X^0 SUBJECT is on the matrix verb, thus the entire sentence comprises the Binding Domain for the MMA. In the following two cases, however, neither bar-level

choice predicts the proper domain.

(30) [Peir$_1$ skipuðu Önnu$_2$ að [PRO$_2$ segja að [Billi$_3$ hef svikið sig$_2$]]]

They ordered^{AGR} Ann to say that Bill had betrayed self

(31) [[Skoðun Jons$_1$] er^{AGR} að [þu hafir svikið sig$_1$]]

Opinion Jon's is that you have betrayed self

If the MMA is considered an XP, the first XP, the lowest subject, provides the SUBJECT. This would make the lowest clause the Binding Domain for sig, where it fails to be bound. If the MMA is considered an X^0, the first X^0 SUBJECT is the Agr on the matrix verb. In (30) choosing this SUBJECT would associate (by agreement) the MMA only with the matrix subject. It would not associate the MMA with the lower subject, PRO, with which it is co-indexed. Still, the Binding Domain includes the PRO subject, so perhaps the Spec-Head agreement aspect of the theory shouldn't really matter. In (31) also, the entire sentence is the Binding Domain for MMA, given an X^0 classification of the MMA because the first X^0 element is the matrix Agr. But, just as in the other theories that classify MMA such that it is subject to Principle A, these data escape inasmuch as there is no c–command between the MMA and its antecedent.

Section 3 Semantic Theories of MMA

Unlike any of the theories thus far diiscussed, Thráinsson (1990) is concerned

with properties of MMA beyond expressing co-reference. It is a very modest descriptive account, but one which is richly instructive. The article does not look for a structural description to explain the distribution of MMA, instead it provides semantic correlations between the use of subjunctives and the use of MMA. It is in these correlations, Thráinsson (1990) suggests, that we will find an explantion for the fact that subjunctives, but not indicative indicatives, are hospitible environments for MMA.

In order to show that an MMA has a meaning "on its own", and is not just an expression of co-reference, Thráinsson contrasts the following pair:

(1) Jón$_1$ segir að Haraldur elski stúlkuna sem kyssti hann$_1$
Jon says that Harold loves^{SBJ} the.girl that kissed^{IND} him

(2) Jón$_1$ segir að Haraldur elski stúlkuna sem kysst sig$_1$
Jon says that Harold loves^{SBJ} the.girl that kissed^{SBJ} self

(2) implies something about the form of what Jon actually said; he must have said something like the following:

(3) Haraldur elska stúlkuna sem kysst mig
Harold loves the.girl that kissed me

(1) does not give such explicit information. It implies that Jon said something like (4)

(4) Haraldur elska Maríu

Harold loves Maria

Here, it is the speaker of (1), rather than the subject of (1), who, given Jon's uttererance, identifies Maria as "stúlkuna sem kyssti Jon" (the girl who kissed Jon). Thus, however Jon actually referred to her, the relative clause in (1) is the speaker's description, whereas the relative clause of (2) is dependent on the content of Jon's utterence. This difference, Thráinsson argues, correlates with certain of the mood differences seen between indicatives and subjunctives. A further contrast is illustrated by the following pair:

(5) Aðeins Jon_1 telur að María elski $hann_1$

Only Jon believes that Maria loves him

(6) Aðeins Jon_1 telur að María elski sig_1

Only Jon believes that Maria loves self

The complement set picked out by aðeins (only) differs for the two sentences. For (5) it is entailed that nobody else believes that Maria loves John. For (6) it is entailed that nobody else believes that he is the one that Maria loves. Again, the pair illustrates a difference in view-point; (5), according to Thráinsson, is the "outside", or speaker's point of view, while (6) represents the subject's point of view.[27]

Thráinsson presents a number of properties of subjunctives that correlate nicely with these obsevations. He illustrates differences between subjunctives and indicatives of the following types:

presuppositional differences

intensionality differences

animacy requirement differences

view-point differences

First, Thráinsson discusses the difference between factivity and non-factivity. The reader is reminded that factives are predicates that presuppose the truth of their complement clauses. Another way to state the generalization is to say that the speaker is committed to the truth of the complement clause. In the case of non-factives, the speaker is neutral as to the truth of the complement clause. With factives, indicatives are used, and subjunctives are not.

(7) Jón veit að tveir plús tveir {eru / *séu} fjórir

Jon knows that two plus two is^{IND} / is^{SBJ} four

Given a non-factive verb like segja (to say), the opposite pattern results.

(8) Jón segir að tveir plús tveir {*eru / séu} fjórir

Jon says that two plus two is^{IND} / is^{SBJ} four

There are certain clause-taking predicates which allow either mood to be selected. Such pairs are ambiguous as to whether or not they presuppose the truth of the complement

clause. The contrast below is illustrative of a difference in speaker-commitment

(9) ⊤⊥ Jón las það í blaðinu að María hafði komið heim, en hún kom ekki heim
Jon read it in newspaper that Mary had^{IND} come home, but she came not home

(10) Jón las það í blaðinu að María hefði komið heim, en hún kom ekki heim
Jon read it in newspaper that Mary had^{SBJ} come home, but she came not home

The fact that a contradiction results when the indicative option is chosen shows that the speaker's commitments are associated with the use of the indicative. No contradiction results with the subjunctive, indicating that using the subjunctive does not commit the speaker to the truth of the complement clause.

These examples show that the use of the indicative permits no difference between the attitude of the speaker versus that of the matrix subject while the use of the subjunctive does permit attitude splits. With other pairs that allow either mood to be selected, Thráinsson demonstrates that there are restrictions that apply with respect to subjunctive use. These restrictions apply to the subject of the subjunctive-selecting predicate. First, there has to be an intensional relation between the subject and the complement clause. This in turn predicts that this subject has to be animate. The adverb óviljandi (inadvertently), is inconsistent with the intensional relation triggered by the use of the subjunctive. Thus we get a contrast, depending on which mood is selected in the complement clause.

(11) Jón kom því óviljandi til leiðar að María kom heim

Jon brought it about inadvertently that Maria came^{IND} home

(12) * Jón kom því óviljandi til leiðar að María kœmi heim

Jon brought it about inadvertently that Maria came^{SBJ} home

Similarly, using a predicate like renya (to try) implies an intensional relation on the part of the subject. Using the subjunctive is compatible with this relation, while the indicative is not, as this contrast shows:

(13) * Jón var að renya að kom því til leiðar að María kom heim

Jon was trying to bring it about that Maria came^{IND} home

(14) Jón var að renya að kom því til leiðar að María kœmi heim

Jon was trying to bring it about that Maria came^{SBJ} home

Given the intensionality requirement, a requirement of animacy on the part of the subject of the subjunctive-taking predicate is to be expected, while no such restriction comes about with the use of the indicative.

(15) Rigningin kom því til leiðar að María kom heim

The rain brought it about that Maria came^{IND} home

(16) * Rigningin kom því til leiðar að María kœmi heim

The rain brought it about that Maria came[SBJ] home

There are certain modals which express a limited range of speaker view-point attitudes. It seems that a speaker must choose between his own view-point and that of the intensional agent's because the use of the deontic model hafa ekki átt (should not have) is compatible only with the indicative. As we saw in the pairs in (7) versus (8) and (9) versus (10), the use of the indicative indicates a truth-value commitment on the part of the speaker. The fact that an indicative clause but not a subjunctive clause is compatible with the view-point modal suggests that the speaker view-point is also preserved under indicative. This pair illustrates:

(17) Jón hefði ekki átt að upplýsa hver hafði barið Harald

Jon has not ought to revealed who had[IND] hit Harold

(18) * Jón hefði ekki átt að upplýsa hver hefði barið Harald

Jon has not ought to revealed who had[SBJ] hit Harold

Thráinsson does not say which (if any) of the above semantic properties of the subjunctive is the crucial one for housing an MMA, but the scrupulous attention he pays to laying out the distinctions one finds does point to a particular semantic characteristic. Thráinsson is careful to show that one cannot conclude that the mere presence of

subjunctive is enough to allow MMA. A complementizer such as fyrst (since) triggers the presupposition of truth of its complement clause. Thus, it does not permit a subjunctive complement.

(19) Jón kemur fyrst María elskar hann

Jon comes since Maria loves him

(20) * Jón kemur fyrst María elski hann

Jon comes since Maria loves him

Since a subjunctive is not permitted in this structure, neither is MMA. However, when such a structure is embedded under a subjunctive-taking verb like segja (to say), we get subjunctives all the way down, under the "domino-effect". This triggers an environment that is hospitable to MMA, as the following sentence shows.

(21) $Jón_1$ segir að $Haraldur_2$ komi fyrst María elski sig_1

Jon says that Harold comes^{SBJ} since Maria loves^{SBJ} self

The MMA is in the proper environment – a subjunctive clause. But notice that it is bound by an antecedent that fits one of the semantic properties listed above, viz there is an intensional relation between the antecedent and the complement clause. This relation does not hold of the lower down subject. Footnote 8 in Thráinsson's article shows the

crucial contrast. When there is no intensional relation between antecedent of the MMA and the complement clause, a MMA so indexed is ungrammatical, despite the subjunctivized clause.

(22) * $Jón_1$ segir að $Haraldur_2$ komi fyrst María elski sig_2

Jon says that Harold comes^{SBJ} since Maria loves^{SBJ} self

With this and other data, this article shows that subjunctivity is a necessary but not sufficient condition for the presence of MMA. More importantly, it brings out previously under-discussed properties of subjunctives in relation to MMA interpretation.

Sigurðsson (1990), like Thráinsson (1990) pursues a semantic explanation for the behavior of MMA. The two articles are also similar in that Sigurðsson sees a correlation in the function of moods and the use of MMA. After demonstrating data concerning how view-point determines which indexical expression such as here/there and today/tomorrow or me/you will be deployed, Sigurðsson proposes the idea that language permit a speaker the capacity to cast her expressions as her own, in a presentation he calls "primary ego" or as a presentation of a "secondary ego". Primary ego presentations are handled by indicative use, while secondary ego presentations are handled by subjunctive use. Sigurðsson reviews most of the same semantic facts as Thráinsson (1990), so they will not be rehearsed again here. He does improve on the description of the use of indicative versus subjunctive. Thráinsson (1990) acknowledges that the identification of factivity with indicatives is not quite right, without offering an alternative description.

Sigurðsson's idea is that indicatives are used in circumstances in which the speaker takes responsibility for the truthfulness of the clause, whereas subjunctives are used when the speaker takes no responsibility for the truthfulness of the clause.

There are additional phenomena that influence mood-selection, which Sigurðsson discusses in order to point out types of shift in view-point that are not generally discussed in the literature on indexicals. Choice in tense is a factor that can influence mood selection, for example. The verb vita in the present tense selects indicative; when it is in the past tense, either mood is possible. Observe the contrast below.

(23) Ég vissi að þú komst heim
I knew that you came^{IND} home
'I knew you had come home'

(24) Ég vissi að þú kœmir heim
I knew that you came^{SBJ} home
'I knew that you would come home'

Sigurðsson argues that a shift in tense allows a shift in view-point. The two mood choices reflect two view-points. In (24), in Sigurðsson's parlance, the speaker conceives of himself as a secondary-ego, distinguishing between his present and past selves. In choosing the indicative in (23), by contrast, the speaker makes no such distinction.

In other contexts, Sigurðsson's conception of how mood-selection functions works to explain data that has usually been explained in terms of scope. Take for example the conjunction af því að (because). As a rule, because-clauses have truth presupposed, and they are factive in Icelandic. However when embedded under negation, the speaker has a choice of mood. The following pair represent different assertions,

however.

(25) Jón fór ekki af því að hann var reiður

Jon left not because he was^{IND} angry

(26) Jón fór ekki af því að hann væri reiður

Jon left not because he was^{SBJ} angry

By Sigurðsson's reasoning, the indicative because-clause in (25) is the speaker's responsibility. (25) entails that Jon did not leave. The speaker supplies the reason for this was that Jon was angry. In contrast, the because-clause of (26) is not the speaker's responsibility – it represents someone else's assertion. (26) entails that Jon did leave, but the reason, supplied by someone other than the speaker, viz that he was angry, is denied by the speaker.

These examples are used to argue for Sigurðsson's position that the reason MMA appear in subjunctive rather than indicative clauses is that they are interpreted as secondary-ego expressions. If indicatives represent the predicates for which the speaker (or primary ego) takes responsibility, then she cannot use this mood when presenting predicates which she attributes to a secondary-ego. Ergo, the subjunctive is selected for secondary-ego presentations. The distribution of MMA can be predicted from the combination of its 2ndEgo meaning and the responsibility allocation of the moods. Indicatives represent only the 1stEgo responsibility; there is no syntactic or even semantic

problem with a sentence like (27), according to this analysis.

(27) * $Jón_1$ veit að þú hefur svikið sig_1

Jón knows that you have^{IND} betrayed self

(27) is merely incompatible with MMA. This is because the mood is compatible only with primary ego presentation, while the MMA refers to a secondary-ego.

Sigurðsson shows that a syntactic analysis of MMA is bound to fail by comparing two different kinds of adverbial phrases, one which allows MMA and one which does not. Generally, adverbial conjunctions cannot house MMA, but there is one type that can: purpose clauses. Purpose clauses are good "transmitters of view-point". That is, the purpose is expressed with respect to some argument in the matrix clause. Unsurprisingly, purpose clauses are subjunctively inflected, and are hospitable to MMA.

(28) $Jón_1$ fer sennilega til að þú gleymir $sér_1$

Jon goes probably so that you forget self

Concessive clauses, which are of the same syntactic structure, also take subjunctive clauses. But they fail to transmit any point of view, consequently a secondary-ego reference has no view-point connection. (29), in contrast to (28) is not hospitable to MMA.

(29) * Jón$_1$ fer sennilega þó að þú gleymir sér$_1$

Jon goes probably although you forget self

Sigurðsson's article, like Thráinsson's (1990) article provides rich evidence that a semantic component is necessary in building a theory of the distribution of MMA. In addition, it puts for reasons to be suspicious of a purely structural account of them. In examining the semantic properties of subjunctives from the perspective of indexicals like temporal operators and the like, he illustrates that MMA is but one component in the linguistic system available to a speaker for the representation of another linguistic agent's viewpoint. Neither of these semantic theories mentions the place of infinitives in the distribution of MMA, although they are grammatical in this environment. It is therefore not clear whether they consider the properties reported for subjunctives to be applicable to infinitives or not. Inasmuch as both treat the local cases of MMA as being of a different order than the long-distance instances, it would be interesting to know whether the infinitive cases should fall under the local rubric or the subjunctive one.

Notes To Chapter Three

1. It is not, I believe, an intended effect of Condition B to allow bound names or pronouns in lexically reflexive predicates.

2. It is not stated, but since it is not claimed that MMA lack person features, I assume that R&R take MMA to have 3rd person features.

3. Provided one accepts the premise that reflexives reduce the valency of the predicates they occur in, mono-clausal cases present no particular problem.

4. Although it is stated more than once that "the A-Chain domain of a given NP is a subdomain of its c-command domain", I am unable to see how this follows from the Chain Condition. In section 8 of the article it is said that the Chain Condition forces the +R element of the chain to be the head, which c-commands its referentially dependent, –R element, and that this is what distinguishes (i) from (ii).
(i) Max_1 said that [he_1 criticized $himself_1$]
*(ii) * Max_1 said that [$himself_1$ criticized him_1]*

5. Presumably, the syntactic predicate x expect y is reflexive-marked prior to LF, while the complex predicate x to-pass-expect y is reflexive-marked at LF.

6. The interpretation of pronouns that fall outside of their definition of a predicate is not given any special name however, so it is unclear what the status of either logophoric or non-logophoric arguments is for Reinhart and Reuland, since their use of the term appears to be quite a bit larger than its usage elsewhere in the literature. R&R indicate that the conditions on logophoricity is a matter of discourse principles, but the relationship between logophoric and non-logophoric DP expressions isn't treated.

7. The principles governing the behavior of logophors would have to determine why locational logophors still seem to require clausal antecedence, as witnessed by (i)
*(i) * Jan_1 was just standing there, but I saw a snake near $himself_1$*
while logophors of the type seen in (20) do not, yet seem to be sensitive to the person features of the anaphor, since (ii) is not acceptable.
*(ii) * The queen invited Lucie and himself to tea*
Logophors of the type seen in (22), which are part of the class of the data for which the term was originally coined, conform to some antecedency conditions as well, given the ungrammaticality of (iii)
*(iii) * $Lucie_1$ believes that we should elect Lili and $himself_2$*

8. This term is somewhat misleading since it is used for two classes of predicates: those that cannot appear with an object argument that is not reflexive, like ræskja (clear one's throat) as well as for those that can, like raka (shave). For the latter, mention of a "double entry" is sometimes made. Given the status of reflexive-marking in R&R, this

classification seems to me to beg the question.

9. In Chapter Two, I presented a reason for the lack of nominitivity in SE anaphors which was tied to the co-occurrence of verbal agreement and nominitivity. This argument has to with my claim that SE anaphors in fact do have features; in contexts requiring agreement, those features can never match the set in verbal agreement. This makes absolutely no predictions about nominitively cased arguments that do not occur in SPEC-IP. Predicate agreement with a nominative argument is one such environment. The following sentence shows that at least the SELF part of SELF anaphors can occur nominitively.

(i) Pétur rakaði sig sjálfur
Peter shaved self -self^{NOM}
'Peter himself did the shaving'

(i) would be used to express a situation that deviates from the norm wherein Peter shaves himself, as opposed to having the barber do it. The noun declension paradigm of Kannada anaphora, both mono- and bi-morphemic, also represents a counter-example. Reflexives appear with every case form, in cluding nominative, in Kannada.

10. It is not clear whether doing so would violate Condition A (a reflexive-marked syntactic predicate is reflexive) in these cases, where there is no syntactic predicate formed.

11. There is some equivocation for these authors about the generality of this movement. For Reinhart and Reuland (1991), the head movement is merely a part of the complex predicate formation of the type seen in (12'), so that the MMA head is just along for the ride, as it were. However, in R&R (1993), in order to distinguish between the readings available for (i) as against (ii), it is claimed that predicate raising fails to occur in (ii), the MMA case.
(i) Münchhausen trok [zichzelf uit het moeras] (ii) Münchhausen trok [zich uit het moeras]
Munch pulled himself out the swamp Munch pulled self out the swamp

12. This claim is especially crucial for most theories which derive blocking effects in Chinese, where MMA is not grammatical if there are first-person or second-person subjects intervening between it and its antecedent. Given that Chinese is among a family of languages whose Infl does not project any overt Agr, it becomes necessary to postulate a non-overt Agr projection. It is a curious outcome of a theory that leans so heavily on the effects of ϕ-features that languages that have overt agreement on its verbs should not be among the languages that exhibit blocking effects.

13. See Pica (1991), for example. See also Cole, Hermon and Sung (1990) for a similar theory for MMA in Chinese. Both of these are head-movement theories. For an XP-

movement theory of MMA, see Huang and Tang (1991), which has somewhat different results. The problems raised for analyses requiring movement are faced by each of these theories.

14. The Empty Category Principle as it was proposed in the Barriers (Chomsky 1986*b*) framework.

15. One might offer the argument, which would be consistent with the movement theory, that the ungrammaticality of (1) and the ungrammatical indexing in (2) is due to the structure of if-then sentences. Specifically, that the if-clause is adjoined too high for the subject to bind into it. This would be to say that if-clauses are IP-adjoined to the consequent clause. If we substitute a quantifier or WH-word into the subject position of such a structure, it can be seen that this proposal must fail. Consider the following sentence:

(i) Who$_1$ would be glad if Mary helped him$_1$

If (i) were structured as suggested, its representation would be as follows:

(ii) [$_{CP}$ who$_1$ [$_{IP'}$ if Mary helped him$_1$ [$_{IP}$ e$_1$ would be glad]]]

Here, as the pronoun is not bound by the trace of the WH-word, this relation represents a deviation from the usual requirement for the interpretation of bound variables. In fact, (ii) represents an instance of Weak Crossover, by just about any definition in the literature. (see Safir (1984) LI 15; May (1985), Logical Form chapter 5; Koopman and Sportiche (1982), Linguistic Review 2). To take just one diagnostic for WC, (ii) violates the Bijection Principle of Koopman and Sportiche in that the WH-word binds both its trace and a pronoun, and there is no c-command between the bindees. Thus (ii) seems to be the wrong structure for (i), since (i) is grammatical. Note that the following sentence is grammatical in Icelandic:

(iii) Hver$_1$ yrði glaður ef Þu hjalpaðir honum$_1$
Who would-be glad if you helped him

Though I have not seen any literature on WC in Icelandic, the point of this digression is that the IP adjunction of the if-clause in (ii) is no more likely to be the correct structure for (1) or (2) than it is for (i).

16. In comparing head-movement to XP-movement theories of MMA, the former may have some advantage with respect to the relative clause data in that these constructions are uncontroversially islands with respect to XP-movement. It may turn out that there are XP-islands which are not islands to heads. Still, it must be pointed out that even the relatively long movement of clitic climbing seen in Italian infinitives (see Kayne 1991), is much more restricted than the putative MMA-movement of (3) would have to be.

17. See Anderson (1990) for discussion of Icelandic verbs of this type, on the meaning correspondences and lacks thereof between verbs, all of the ECM type, with an incorporated reflexive versus the corresponding verb taking a true reflexive argument.

18. The binding domain, in order for this theory to work, has to be defined as the smallest XP containing the X^0 and a c-commanding DP. Thus, if the reflexive in (45) stopped in Infl, where its binding domain is the lowest IP, it would be ungrammatical. Movement to the next Infl gets the reflexive into a domain in which it can be bound.

19. Though none of its proponents discuss it, the only conceivable head-movement that reflexive movement could be compared with is clitic-movement. Verb movement is not a good choice for two reasons. Verb movement involves incorporation of each of the heads it moves through. Also verb movement has quite strict locality conditions.

20. The volitional verb "volere", to want, in Italian allows clitic-climbing, but the verb "desidare", semantically and syntactically in other respects similar, does not; neither does "odiare", to hate. Cinque (1998) suggests that "volere" is reanalyzed as a modal. Whatever the explanation, these contrasts show the very limited nature of the predicates that allow clitic-climbing.

21. This topic is beyond the scope of my purposes here. On the properties of these so-called restructuring infinitives, see Evers (1975), Aissen & Perlmutter (1976), Rizzi (1976), Napoli (1981), Picallo (1985, 1990), Rochette (1990), Kayne (1991), Roberts (1993), Cinque (1998) and Wurmbrand (1998) among others.

22. This is not to say that subject-orientation is not a part of Anderson's (1983) theory. His binding conditions make use of the term "superordinate subject" to get at these antecedency conditions. I am concerned here with the clausal properties that his conditions require because the theories discussed thus far do not deal with these facts.

23. The same claim is used in Picallo (1985) to account for obviation effects seen in subjunctive clauses of many Romance Languages. As noted in Chapter Two, it is not co-indexation that is prohibited; *de se* interpretation of the subject of the subjunctive is.

24. The restriction on (17) has always been reported as a restriction on the binding of the pronoun by the subject. As discussed in the previous chapters, this is not an accurate report. The pronoun may be bound in (17), but only when it is interpreted *non de se.*

25. The prediction that mono-morphemic reflexives allow a local antecedent is incorrect for most Icelandic predicates, but for many MMA languages (e.g., Chinese, Japanese, Russian) the prediction is borne out. That is, most predicates in MMA languages are like the inherently reflexive cases discussed above. So, assuming that this language specific quirk of Icelandic (also Dutch and Norwegian) can be accounted for, let us see how outside the clause, the subjunctive/infinitive requirement of MMA is accounted for.

26. There are some theoretical lacunae because in order for the subjunctive Infl to count as empty, the Agr must be deleted by LF, yet this same Agr must be present to count as a binder for the MMA. It's true that the domain is defined with respect to SUBJECT and not possible binders, but one would think that if the domain is defined at LF, the binder

ought to be present at that level.

27. This is Thráinsson's description of the difference. It's not altogether clear to me whether point of view really is the distinguishing property here. The same two readings are available with other "only" sentences. For example *Only Irena winks at her husband* can mean that nobody else winked at Irena's husband, or that nobody else winks at her own husband. This difference is sometimes described as a difference in whether the pronoun as read as a variable or as referential. The question raised by such examples with MMA is why they are necessarily read as variables or dependent in this context, while the co-indexed pronoun is not. Thráinsson's point is still well-taken inasmuch as this property cannot be attributed to mere anaphoricity, since the same ambiguity persists with reflexives. Because *Only Satan loves himself* gives rise to an ambiguity of the same type, one cannot conclude that expressions whose binding is determinate (by Principle A in this case) are necessarily bound variables or have dependent reference.

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