

Pronouns – Basic Ideas

Gary Hardegree

Department of Philosophy
University of Massachusetts
Amherst, MA 01003

1.	Introduction.....	2
2.	Initial Ideas and Terminology.....	2
3.	Summary.....	4
4.	Exophoric Pronouns	4
1.	Basic Idea.....	4
2.	The Semantics of Demonstrative Pronouns	5
3.	Indexical Pronouns.....	6
5.	Duplicating (Lazy) Pro-Forms	7
1.	Basic Idea.....	7
2.	The Semantics of Lazy Pro-Forms.....	7
6.	Essentially-Anaphoric Pronouns.....	9
7.	Lazy Pronouns that are not Referential.....	10
8.	Internally-Referring Exophoric Pronouns.....	11

1. Introduction

In the next few chapters, we examine pronouns and other pro-forms, although we concentrate on the former.

In traditional grammar, and in traditional lexicography, the term ‘pronoun’ applies to a wide variety of English words – including, but not limited to, the following.

relative pronouns	who, whom, which, ...
personal pronouns	I, you, he, she, it, we, they
reflexive pronouns	myself, yourself, himself, etc.
impersonal pronouns	one, this, that
expletive pronouns	it

Pronouns are a special case of the more general class of *pro-forms*, which include the following.

pro-sentences	Jay may visit tomorrow, in which case I will meet him at the station.
pro-VPs	Jay respects Kay, and so does Elle
pro-adjectives	no such person lives here
pro-common-nouns	this dog is large, but that one is small
etc.	

In principle, but not in practice, for each category *K*, there is an associated category of pro-*K*s.¹

Notice that we have mentioned both pro-nouns and pro-common-nouns. Pronouns are best thought of as pro-NPs, where NP is a super-category that includes proper nouns, definite-determiner phrases and quantifier phrases, which are precisely the sorts of phrases that can serve as subjects and objects of verbs.

2. Initial Ideas and Terminology

Pronouns are pointers. A pronoun can point *externally*, in which case it is said to be **exophoric**, or **deictic**. In this case, the entity to which it points is called its **referent**, and the pronoun is said to be **referential**.² Alternatively, a pronoun can point *internally*, in which case it is said to be **endophoric**, or **anaphoric**. In the latter case, the phrase to which the pronoun points is called its **antecedent**, and the pronoun is said to be **anaphoric to** its antecedent. By analogy, we say that an exophoric pronoun is **exophoric to** its referent.³

So far, we are talking about primary, or direct, pointing. There is also secondary, or indirect, pointing. For example, a pronoun can have a direct antecedent, in virtue of which it has an indirect referent. For example, in the following sentence,

Jay respects his mother

¹ For example, there seem to be no pro-determiners or pro-conjunctions.

² Note carefully that every pronoun has a denotation, since every phrase has a denotation, but not every pronoun has a referent. Specifically, a pronoun has a referent precisely if its denotation is an entity, in which case its denotation is also its referent. As we see later, the denotation of a pronoun need not be an entity.

³ Note carefully that the internal/external distinction is grammatical, not ontological. See Section 8.

the pronoun stem ‘he’ takes ‘Jay’ as its antecedent, in virtue of which it takes the denotation of ‘Jay’ as its referent. Such a pronoun accordingly has both an antecedent [the word ‘Jay’] and a referent [the person Jay].

In this example, the pronoun stem ‘he’ is an example of a **duplicating pro-form**, which is to say it simply repeats (duplicates) the *content* of its antecedent.⁴ The following is an example of a duplicating pro-VP.

Jay respects Kay, and **so does** Elle

In this case the phrase ‘so does’ serves as a pro-VP that duplicates the content of its antecedent, which in this case is the VP ‘respects Kay’.

Such pronouns (pro-forms) are also occasionally referred to as pronouns (pro-forms) of **laziness**, or lazy pronouns (pro-forms). According to this account, a sentence involving a lazy pro-form is a lazy way of writing a corresponding sentence in which the pro-form is absent. For example, the two sentences above are lazy ways of writing the following, respectively.

Jay respects **Jay's** mother
 Jay respects Kay, and Elle **respects Kay**

A pronoun can also have a direct antecedent, in virtue of which it has an indirect antecedent. For example, in the following phrase

man who respects his mother

the pronoun stem ‘he’ takes ‘who’ as its direct antecedent, and it takes ‘man’ as its indirect antecedent, the latter of which governs agreement features, including number and gender.

The direct antecedent of an anaphoric pronoun need not be an NP. We propose to characterize reflexive pronouns [overtly marked by ‘self’ and ‘own’] as **role-anaphoric**, rather than NP-anaphoric. For example, in each of the following sentences,

Jay respects himself
 Jay’s mother respects herself

the reflexive pronoun is directly-anaphoric to the subject-role, in virtue of which of it is indirectly-anaphoric to the NP that fills this role. In the first case, ‘Jay’ fills this role; in the second case, ‘Jay’s mother’ fills this role; in either case, the indirect antecedent governs agreement features.

Reflexive pronouns are examples of pronouns that are **essentially-anaphoric**, which contrast with duplicating pronouns, which are not essentially-anaphoric. For example, in the following sentence

every man respects **his** mother

the pronoun stem ‘he’ does not simply duplicate its antecedent ‘every man’, since this sentence is not equivalent to the following sentence.

every man respects **every man's** mother

⁴ The idea of repetition is indeed the root meaning of the word ‘anaphoric’. For example, according to the *American Heritage Dictionary*, ‘anaphora’ has exactly one entry according to which it means “the deliberate repetition of a word or phrase at the beginning of several successive verses, clauses, or paragraphs.”

Among essentially-anaphoric pronouns, there is a further critical distinction. In particular, either a pronoun is **bound** by its antecedent, in which case we say that it is a **standard anaphoric pronoun**, or it is not bound by its antecedent, in which case we say that it is a **non-standard anaphoric pronoun**. Whereas the former are semantically well-behaved, the latter are semantically quite mysterious, even vexing.

3. Summary

The following table summarizes our classification of pronouns.

Exophoric/Deictic	Endophoric/Anaphoric			
	Role-Anaphoric	NP-Anaphoric		
		duplicating	essentially-anaphoric	
			bound by antecedent	<i>not</i> bound by antecedent
Reflexive Pronouns	Lazy Pronouns	Standard Anaphoric Pronouns	Non-Standard Anaphoric Pronouns	

4. Exophoric Pronouns

1. Basic Idea

Consider the following sentence,

she[↑] is tall

where the superscripted vertical arrow indicates that the pronoun is exophoric, which is to say that it directly points externally. An alternative description of ‘she’ describes it as *demonstrative*, based on the fact that it functions semantically just like a demonstrative phrase – for example:

this/that (female individual) is tall

Being demonstrative, any proper utterance of ‘she’ must be accompanied by a pointing gesture (explicit or implicit), in virtue of which the denotation of ‘she’ is specified. Accordingly, we cannot determine the denotation (i.e., truth-value) of a sentence involving ‘she’ without knowing the context in which it is uttered, and in particular without knowing the intended reference of the pronoun ‘she’, which will generally vary from situation to situation.

Next, we observe that a sentence (more generally, discourse-unit) can contain any number of demonstrative pronouns, and indeed a sentence can use the very same pronoun repeatedly. For example, consider an utterance of the following sentence, where we imagine an army drill instructor selecting "volunteers" for the garbage detail.

I select you[↑], you[↑], and you[↑]

Or, using ‘him’ instead of ‘you’ (imagine a traditional army), we have:

I select him¹, him¹, and him¹

where each utterance of ‘him’ is accompanied by an appropriate pointing gesture.⁵ In order to convey the potential multiplicity of pointing acts, we use numerical superscripts to annotate the various pronoun occurrences. The drill instructor's sentence may then be rewritten as follows,

I select him¹, him², and him³

where the superscripts mark the individual external pointing acts; in particular,

him¹ refers to the first person pointed at;
 him² refers to the second person pointed at;
 etc.

2. The Semantics of Demonstrative Pronouns

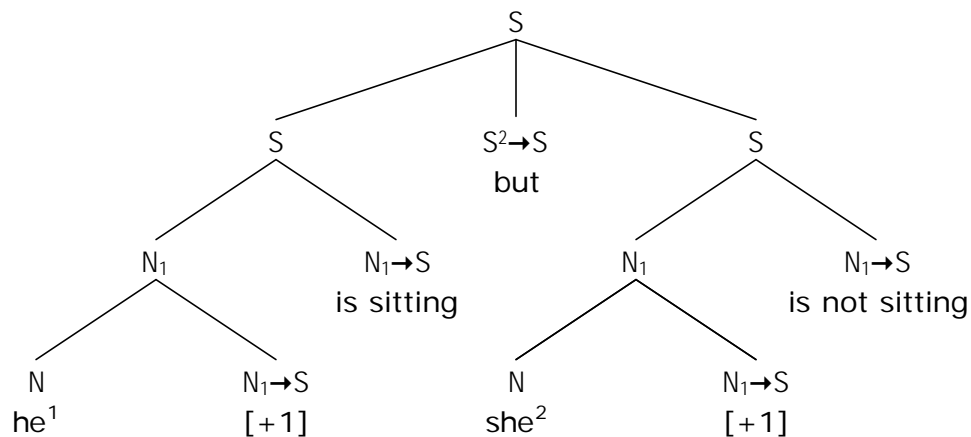
Recall that a situation σ performs a number of semantic duties, including specifying the relevant denotations of situation-dependent lexical phrases, which include demonstrative pronouns. In order to implement this idea mathematically, every situation includes a demonstration-function δ , which is a partial function from \mathbb{N} – the set of natural numbers – into the domain of entities \mathcal{U} . In particular, the individual $\delta(k)$ – also written δ^k – officially serves as the σ -denotation of the k -th demonstrative pronoun; in other words:

$$\llbracket \text{he/she/it}^k \rrbracket^\sigma = \delta^k$$

By way of illustration, we consider the following example.

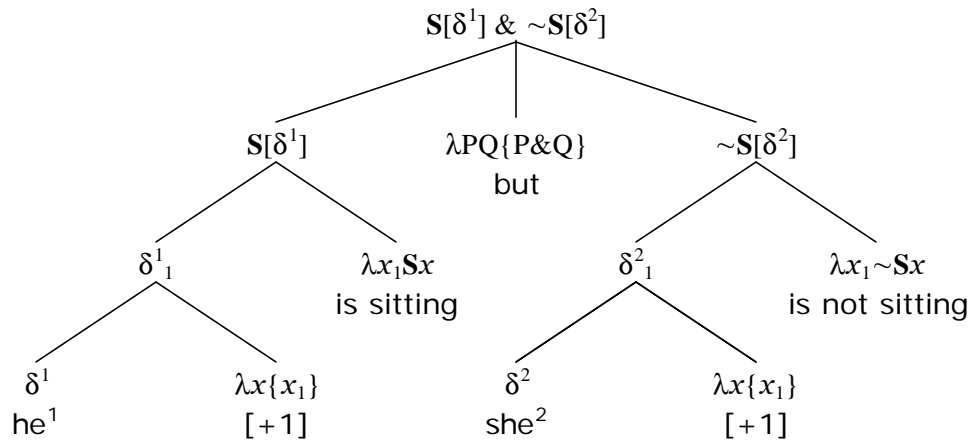
he¹ is sitting, but she² is not sitting

The syntactic-tree is given as follows.



And the semantic-tree is given as follows.

⁵ We assume that each time ‘him’ is uttered, a single soldier is selected, but we do not assume that a soldier cannot be selected more than once. Each ‘him’ points at exactly one soldier, but a given soldier may be pointed at twice or more (perhaps inadvertently, perhaps advertantly).



As usual, the exact denotations of some nodes will depend upon the relevant situation, which will specify who is and who is not sitting, but it will also specify who is the first person pointed at, who is the second person pointed at.

3. Indexical Pronouns

In addition to demonstrative pronouns, exophoric pronouns also include indexical pronouns.⁶ Among indexical words are the following prime examples.

I, you, we, here, now

According to their indexical readings, these words refer to salient features of the context of utterance, including:

I	speaker
you	addressee(s) (audience)
we	group surrounding the speaker, and perhaps the addressee(s)
here	location
now	time

Curiously, except for ‘I’, these words all have demonstrative readings as well. Accordingly, by way of simplifying our account of exophoric pronouns, we propose that all indexical pronouns are tacitly demonstrative. We additionally propose that every situation includes a default demonstration δ^0 , which refers exclusively to the speaker of the utterance, and which serves as the denotation of the word ‘I’.

For example, the sentence

I select you

amounts to saying:

δ^0 selects δ^1

⁶ Using the narrow sense of ‘indexical’.

5. Duplicating (Lazy) Pro-Forms

1. Basic Idea

We propose that a **lazy pro-form** is, by definition, one that simply *duplicates* its antecedent, and in particular is co-extensive with its antecedent. Thus, for semantic purposes, a lazy pro-form can simply be replaced by its antecedent without affecting the content of the surrounding phrase. For example, on its most plausible reading, the following sentence

(1) Jay respects Kay, but **she** does not respect **him**

has the same content as the following.

(1') Jay respects Kay, but **Kay** does not respect **Jay**

On the other hand, in the following sentence.

(2) Jay respects Kay, and **so does** Elle

the phrase ‘so does’ serves as a pro-VP that is anaphoric to the VP ‘respects Kay’. This too is a lazy pro-form [a pro-VP], since it simply duplicates its antecedent ‘respects Kay’, since it has the same content as the following.

(2') Jay respects Kay, and Elle **respects Kay**

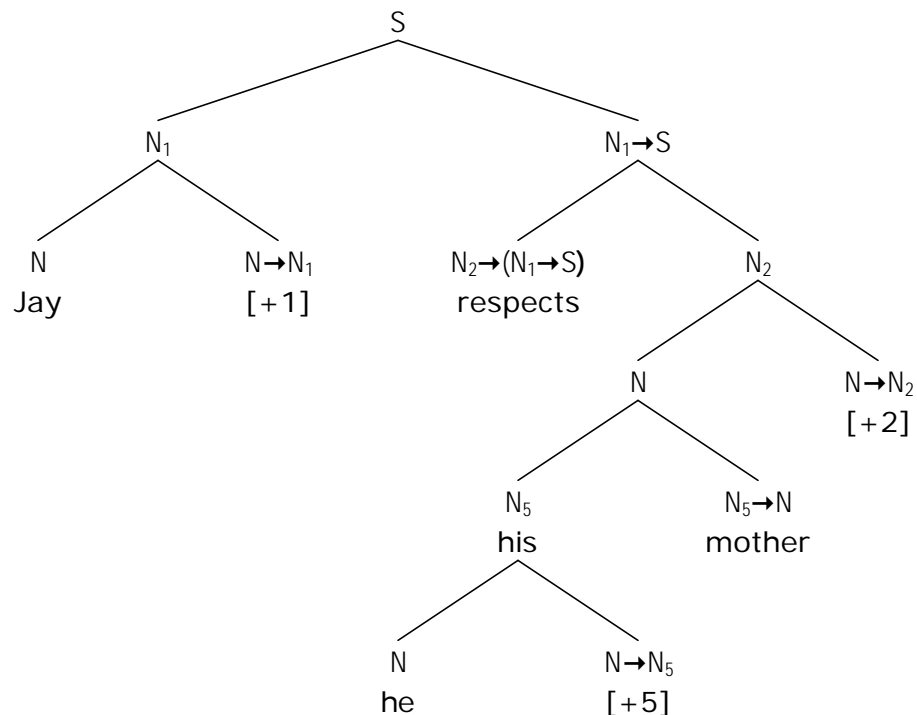
2. The Semantics of Lazy Pro-Forms

By way of introducing the semantics of lazy (duplicating) pro-forms, we consider some example phrases.

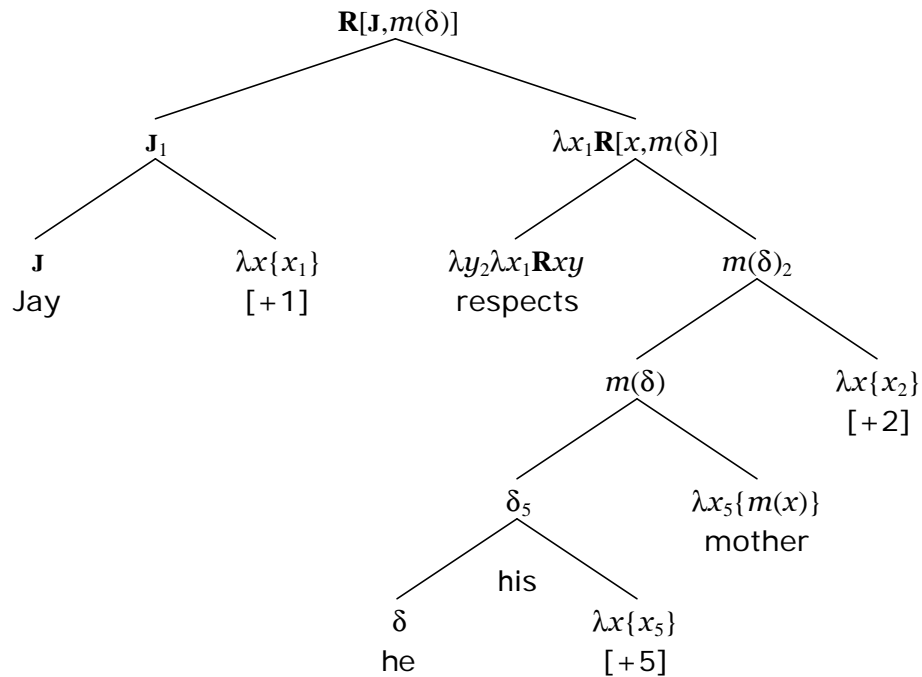
1. Example 1

Jay respects his mother

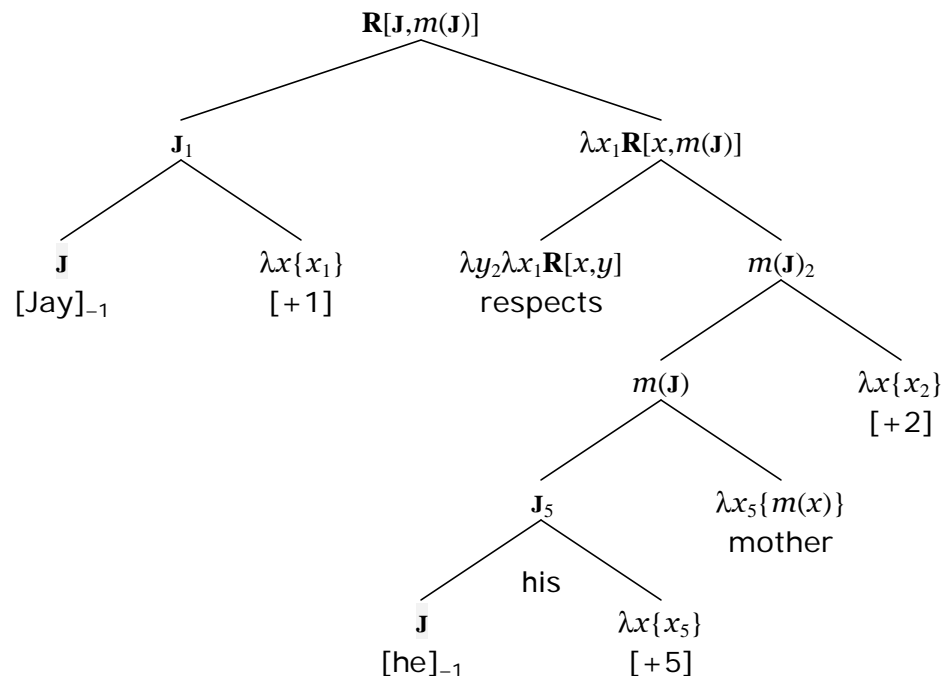
The following is a plausible syntactic analysis.



This sentence has a reading according to which ‘he’ is demonstrative, in which case it has the following semantic tree, where in order to reduce clutter, we use ‘ δ ’ in place of the official ‘ δ^1 ’.



Of course, a more salient reading is obtained by treating ‘he’ as anaphoric to ‘Jay’. In that case, we obtain the following semantic tree.



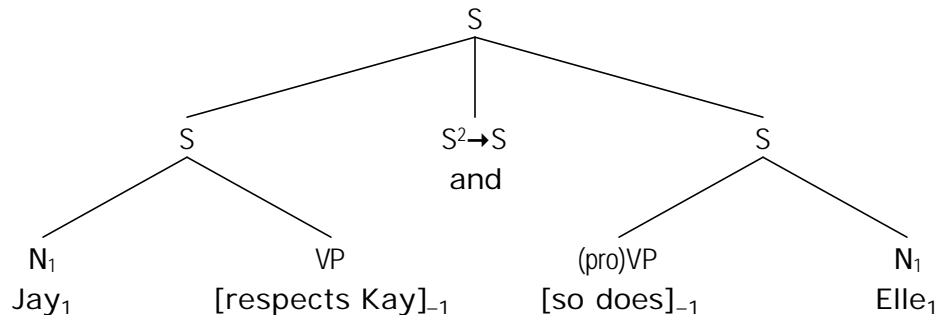
The negative subscripts indicate what phrase a pro-form is linked to. Note that the shaded semantic entries – for ‘he’ and for ‘Jay’ are identical. This is the characteristic feature of a lazy pro-form – it simply repeats the content of its antecedent, which is summarized in the following new *global* semantic rule.

The semantic-value of a lazy pro-form is identical to the semantic-value of its antecedent.

2. Example 2

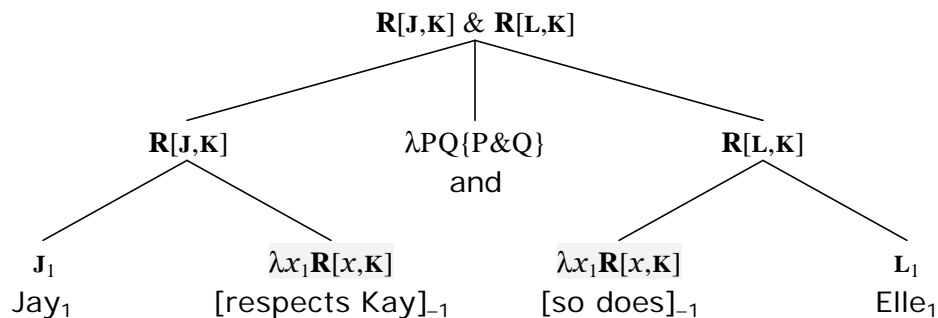
Jay respects Kay, and **so does** Elle

Here, it is plausible to regard ‘so does’ as lazy-anaphoric to ‘respects Kay’, in which case this sentence is syntactically analyzed via the following tree.



Once again the negative-subscripts indicate that the pro-form is lazy-anaphoric to its mated expression.

The corresponding semantic-tree goes as follows.



Note that the semantic entry for ‘so does’ is identical to the entry for ‘respects Kay’.

6. Essentially-Anaphoric Pronouns

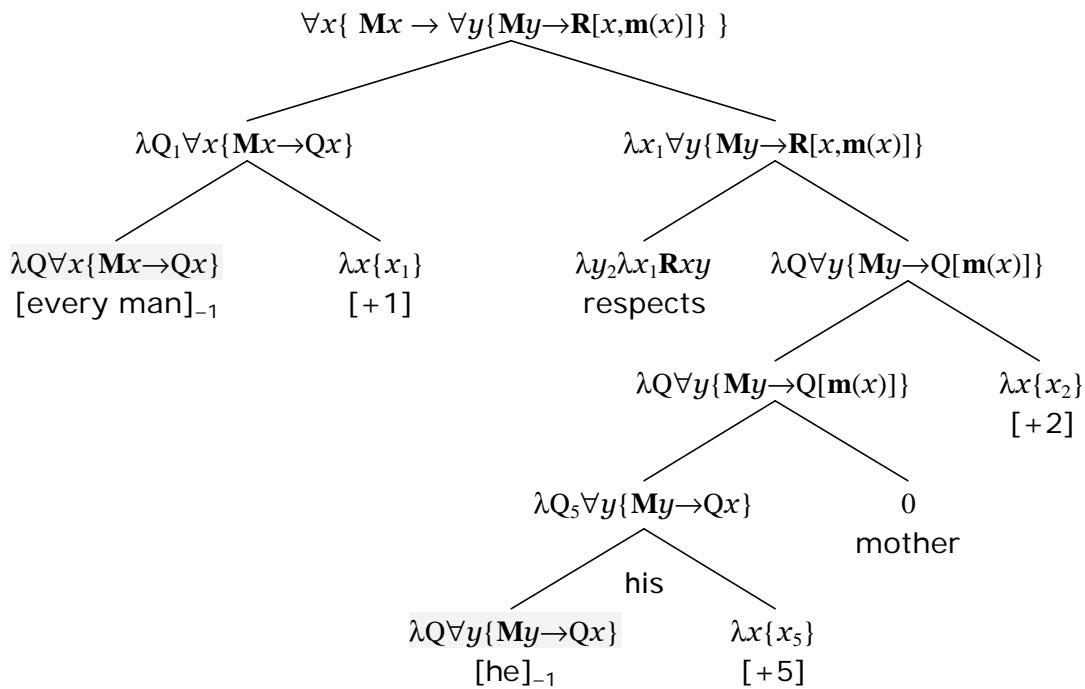
What makes a pro-form *anaphoric* is that it is anaphoric *to* another phrase in the discourse unit – its *antecedent* – to which the pro-form directly points. A duplicating pro-form is so called because it duplicates the semantic-value of its antecedent. By contrast, an *essentially-anaphoric* pronoun does not simply duplicate its antecedent. Probably the simplest example occurs in the following sentence.

(1) every man respects his mother

As it stands, the pronoun stem ‘he’ could be deictic, in which case the sentence says that every man in the relevant domain respects the salient male individual's mother. More likely, however, ‘he’ is anaphoric to ‘every man’, which is clarified in the following re-write.

(1') [every man]₋₁ respects [he]₋₁'s mother

The obvious next question is whether ‘he’ is a lazy pronoun, in which case it simply duplicates its antecedent ‘every man’. In that case, we obtain the following semantic-tree.



The top node indicates that this analysis reads the original sentence as saying that every man respects every man's mother, which it does not.

The proper semantic analysis of such sentences is carried out in subsequent chapters.

7. Lazy Pronouns that are not Referential

An exophoric pronoun points *directly* at an entity that is grammatically-external to the relevant discourse-unit, and also refers to this entity. Such a pronoun may be said to be directly referential. By contrast, an *indirectly-referential (indirectly-exophoric)* pronoun points directly at a grammatically-internal phrase (its antecedent), and indirectly at a grammatically-external individual. Alternatively stated, such a pronoun refers to an external individual (its *referent*) *via* an intermediate phrase (its *antecedent*). For example, in the following sentence,

- (1) Jay respects Kay, but she[↑] does not respect him[↑]

the broken-arrow annotation indicates that a pronoun is indirectly-exophoric. For example, ‘she’ refers *via* its antecedent – i.e., ‘Kay’ – to Kay, and ‘he’ refers *via* its antecedent – i.e., ‘Jay’ – to Jay.

Another way to understand ‘[↑]’ is to treat each occurrence of ‘[↑]’ as short for an ‘i.e.’ comment. For example, (1) may be clarified as follows.⁷

- (1′) Jay respects Kay, but she (**i.e.** Kay) does not respect him (**i.e.** Jay)

⁷ For these simple examples, we drop the parenthetical comma, to avoid clutter. This may be justified by recalling the fact that ‘i.e.’ stands for ‘id est’ which literally means “it is”; so, when it is followed by a singular term, it *should not* have comma following it.

Since every such pronoun is implicitly accompanied by an ‘i.e.’ comment, we will call them *IE pronouns*. This is fortuitous, since ‘IE’ also stands for ‘indirectly exophoric’.

According to our proposal, a lazy pronoun is *co-extensive* with its antecedent, since it duplicates the content of its antecedent. A natural question is whether every lazy pronoun is *co-referential* with its antecedent. To see that this does not always obtain, consider the following example.

a wise man cashes [his paycheck]₋₁ at the bank;
a fool cashes [it]₋₁ at the racetrack

Here, ‘it’ is anaphoric to the phrase ‘his paycheck’. This seems to be a clear-cut case of pronominal laziness, since ‘it’ may be regarded as a lazy-duplication of its antecedent. On the other hand, since no wise man's paycheck is identical to any fool's paycheck, the pronoun ‘it’ cannot be co-referential with ‘his paycheck’. On closer examination, however, we see that neither of these expressions is referential, since neither expression refers to a particular paycheck. This is clarified in the chapter on standard anaphoric pronouns.

Contrast this situation with the following example.

Jay brought [his paycheck]₋₁ home;
Kay cashed [it]₋₁ at the bank

In this example, ‘his paycheck’ refers to a particular object, and insofar as ‘it’ is anaphoric to ‘his paycheck’, ‘it’ refers to the very same object.

Notice also that ‘it’ cannot refer to Kay's (own) paycheck. If we want to express that proposition, we must say something like the following.

Jay brought home his paycheck;
Kay cashed **hers** at the bank

Here, ‘hers’ derives from ‘her one’, where ‘one’ is a pro-CNP, which in this case is anaphoric to ‘paycheck’.⁸

8. Internally-Referring Exophoric Pronouns

At the outset, we have maintained that pronouns point internally at antecedents or externally at entities. We also noted that this is a grammatical distinction, not an ontological distinction. For example, consider the following sentence.

the first word of this sentence is ‘the’

One naturally hears this as referring to the sentence itself, but ‘this sentence’ is a demonstrative phrase that refers to *whatever* sentence is salient at the moment ‘this sentence’ is uttered. But if the containing sentence is the salient sentence, then the phrase ‘the first word of this sentence’ definitely points *internally* in the sense that it *refers* to something *within* the sentence.

⁸ The only phonetically-salient derivation is ‘mine’ from ‘my one’. On the other hand, there are rural dialects in the southeastern U.S. that employ the following expressions, which make other derivations look more phonetically obvious.

your'n [presumably short for ‘your one’]
your'ns [presumably short for ‘your ones’].

However, this is not *grammatically*-internal pointing. Rather, this is an example of a demonstrative expression that happens to refer directly to a linguistic item, which happens to be inside the sentence. In particular, ‘the first word of this sentence’ is not *anaphoric* to ‘the’; rather, it is *exophoric* to ‘the’.

This distinction throws light on the following example due to Quine (*Word and Object*).

- (1) Georgione was **so** called because of **his** size

First, the pronoun stem ‘he’ inside ‘his’ is quite clearly anaphoric to ‘Georgione’, and is also co-referential with it. In particular, the above sentence is equivalent to the following.

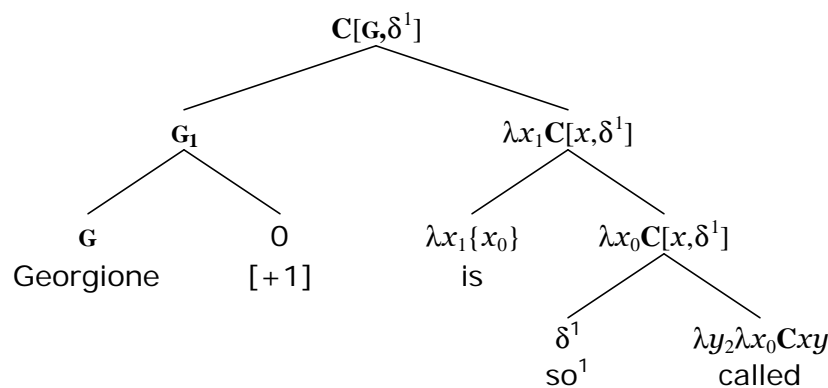
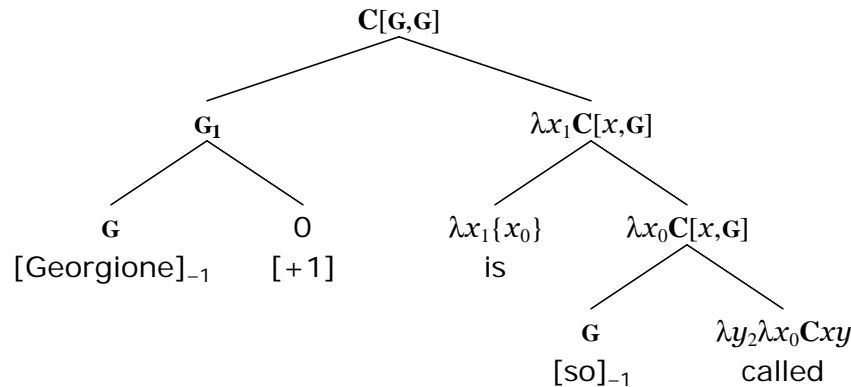
- (2) Georgione was **so** called because of **Georgione's** size

What about the word ‘so’? Whereas ‘he’ is *anaphoric* to, and co-referential with, ‘Georgione’, ‘so’ is neither anaphoric to, nor co-referential with ‘Georgione’. This is because ‘so’ refers, not to the man Georgione, but to his name. The underlying form of (2) seems rather to be:

- (3) Georgione was called ‘**Georgione**’ because of **Georgione's** size

In other words, ‘so’ does not get its content *via* ‘Georgione’; rather, its content *is* ‘Georgione’. In other words, ‘so’ is a deictic pronoun, which is exophoric to ‘Georgione’.

The following two trees illustrate the difference between anaphoric, and exophoric, to ‘Georgione’.



In the first calculation, the sentence says that Georgione (G) is his own name, which is absurd! On the other hand, in the second calculation, the sentence says that the salient object δ^1 is Georgione's name, where presumably the salient object δ^1 is the word ‘Georgione’.