Determiner phrases can be used to invoke discourse entities. This can be done in two ways. They can introduce entities into the discourse and they can point to entities that are “already” part of the discourse. The definite/indefinite contrast is a poster-child for this distinction.

1. A Turkish grad-student is signed into this class.
2. The Turkish grad-student is signed into this class.

The subject of (1a) introduces into the discourse an entity and says about her that she is a grad-student and Turkish and that she is enrolled. The subject of (1b), by contrast, points to an entity that is a grad-student and Turkish and says about her that she is enrolled. (1b) is successful only if there is an entity in our shared conversation that is a Turkish grad-student, and, moreover, reference is successful only if there is exactly one such entity. Let’s call DPs that have the dependency on discourse entities that (1b) illustrates: anaphors. This proseminar is going to focus on DPs that can be used anaphorically.

In addition to definite descriptions of the sort illustrated by (1a), and the closely related demonstratives, the other anaphors that will be of interest for us are (definite) pronouns. These come in a variety of forms cross-linguistically. An initial first cut that might be useful to make is between overt forms – like the English she and they – and the null forms that are found in many languages.

In (1), the context of this class is sufficient to define the parameters of our discourse. Using the Turkish grad-student requires that in this setting there be a salient unique Turkish graduate student, and this definite description is anaphoric to that individual. Sometimes, of course, linguistic material itself is responsible for defining the parameters of our discourse. The subject of (2) raises the saliency of Brian and the subject of (3) introduces an entity.

3. A way of defining discourse objects has been suggested.

These entities now become eligible antecedents for anaphors:

   a. Brian always wears them on important occasions.
   b. He always wears them on important occasions.

5. A way of defining discourse objects has been suggested.
   a. The way of defining discourse objects will probably fail to be perfect.
   b. It will probably fail to be perfect.

A commonplace observation is that, though the subjects of both continuations are anaphoric, there is a preference for the one that uses the pronoun. There is something odd about (4a) and (5a). This effect has earned a misnomer.

6. The Repeated Name Penalty
   Don’t repeat a name.

It isn’t obvious how this condition applies to (5), of course, where no names are in evidence. The McGuffin of this class is the Repeated Name Penalty – we would like to assemble material that we feel bears on the source of the Repeated Name Penalty. The source of the Repeated Name Penalty should tell us what to put in place of the word “name” in (6); it should tell us what the class of things it applies to are.

Let me set out some observations that allow us to make a first rough pass at describing what the Repeated Name Penalty applies to. We’ll start with the understanding that the Repeated Name Penalty is a thing about anaphors. We needn't formulate a condition of this sort for things that aren't anaphors to begin with. Of the class of things that can be anaphors, we learn from (4) and (5) that pronouns are not among the things susceptible to the Repeated Name Penalty. Definite descriptions are, (5a) teaches us. Perhaps we can assimilate names to definite descriptions. At least some uses of names seem to be roughly as (7) indicates.

7. \[\text{[Mary]} = \lambda x. x \text{ is named } \text{'Mary'}\]
When names are in argument position, they get closed by a silent (in English) \( \iota \) operator. This gives us a simple way of thinking about cases like:

(8)  The first Mary to join our faculty will be the last.

Names can also be used in argument positions without getting closed with \( \iota \), as in (9).

(9)  She called him John.

Matushansky (2008) suggests a slight variant of (7) for these cases.

(10) \( [\text{John}] = \lambda x. \lambda R. \lambda e. x \text{ is } R'd [\xi \iota n] \text{ in } e \)

This gives us:

(11) \[
\begin{array}{c}
\text{DP} \\
\triangleleft \text{She} \\
\text{vP}
\end{array}
\quad \lambda x. \lambda e. x \text{ is AGENT of } e \land \text{him is called } [\xi \iota n] \text{ in } e
\]

\( \text{v} \)

\( \lambda e. \text{him is called } [\xi \iota n] \text{ in } e \)

\( \text{called him John} \)

On this view, then, "\( R \)" is a free variable in contexts other than these, and it gets closed conventionally by something equivalent to "named." There are problems with this general direction – one that claims that names can be treated as definite descriptions – but I suggest that we allow names to be able to have this kind of analysis when they are anaphors. This will allow us then to frame the Repeated Name Penalty so that it applies to just definite descriptions.

So our first revision to (6) is (12).

(12)  The Repeated Name Penalty

Don't make an anaphoric definite description from a repeated NP.

With the understanding that \textit{Brian} is an NP, this correctly describes the effect that (4a) (5a) illustrate.

The "repeated" part of this formulation is also (probably) wrong. We need something to register the oddness of using the definite descriptions in the b-cases of (13) and (14) as well.

(13)  a. The Turkish female grad-student is present today.
       b. Duygu is enrolled as an official student.

\textit{compare:} She is enrolled as an official student.

(14)  a. A method for calculating discourse saliency will be unveiled in this class.
       b. The Dillon procedure has yet to be published.

\textit{compare:} It has yet to be published.

So perhaps we should block all cases of using a definite description anaphorically when the linguistic means for introducing a discourse antecedent is used.

(15)  The Repeated Name Penalty

Don't use a definite description as an anaphor if a linguistic means has been used to introduce its antecedent.

We should guard against construing this too broadly, since it is possible to use language to set up a context in which a definite description can (arguably) be used anaphorically. For instance:

(16)  When you buy a used book, you should check the spine.

We want something that specifically involves coreference.

(17)  The Repeated Name Penalty

Don't use a definite description as an anaphor if it refers to a previously occurring DP.

Not all definite descriptions are created the same, however, and this is an abyss we probably will need to peer into if we are going to frame the Repeated Name Penalty this way. For instance, epithets have the form, and anaphoric nature, of the definite description in (5), but they do not invoke the Repeated Name Penalty.

(18)  a. Brian always wears bow-ties.
       b. The sartorial savant makes me green with envy.

We might see as a similar sort of case – though these aren't usually described as epithets – cases like (19).

(19)  a. Brian should have worn a bow-tie.
       b. The recently tenured professor isn't known for his sartorial prowess.

Our account of the Repeated Name Penalty should explain these cases. And we should also keep in mind that definite descriptions are probably not always anaphors. We have examples like (20).
We'll vote at the end of the class about the hardest problem. The president of Uzbekistan will be only tangentially part of this course.

Moreover, the Repeated Name Penalty applies with variable force, it seems.

A linguist walked into a bar. The linguist ordered a Corpse Reviver.

A tall linguist ordered a Corpse Reviver.

The phonologist ordered a Corpse Reviver.

The philosopher ordered a Corpse Reviver.

A temptation we will not resist is to characterize (22) by formulating the Repeated Name Penalty as (23).

The Repeated Name Penalty
Don't use a (non-pronominal) definite description as an anaphor if a pronoun can be used to communicate the same thing.

This also gives us a handle on why the Repeated Name Penalty kicks in only when the definite description that triggers it is taken to be coreferent with some previously occurring linguistic material. (23) claims that the conditions that determine when a pronoun can be used are also those that determine where the Repeated Name Penalty arises. The repeated Name Penalty does not apply in (16) because a pronoun cannot be used in such contexts.

When you buy a used book, you should check the spine.

When you buy a used book, you should check it.

And it does not apply in contexts where the anaphoric definite description is provided an antecedent just by the context of use, as in (1b) or, the better, (25).

The department has a website.

compare: It has a website.

What we're seeing in this cline is something to do with the "repeated" part of the description of the Repeated Name Penalty. The penalty is weakest when the NP part of the anaphoric definite description is, in some sense, reprising the previously occurring DP. One of our goals should be understanding how to explain this variability.

Developing an account of the Repeated Name Penalty is the McGuffin of the class. But the topic is the use of models of competition in grammar. There are facts that have been understood as evidence that the Repeated Name Penalty should be framed as a condition that makes reference to other kinds of anaphors. For example, consider the paradigm in (22).

A woman entered the room.

She opened a book.

The woman opened a book.

A man and a woman entered the room.

She opened a book.

The woman opened a book.

A temptation we will not resist is to characterize (22) by formulating the Repeated Name Penalty as (23).

The Repeated Name Penalty
Don't use a (non-pronominal) definite description as an anaphor if a pronoun can be used to communicate the same thing.

This will follow from the impossibility of using a pronoun to communicate what (25) does. There is an interesting hiccup to this, though. Or at least I believe there is. I do not find contrasts in the well-formedness of examples that involve indexicals:

The present speaker sometimes suffers stage-fright.

I sometimes suffer stage-fright.

The people listening to me now might be bored.

You might be bored.

As we look at ways of working out (23), we might want to keep our eye on this fact.

We can think of (23) as an instance of a more general kind of process, informally laid out in (28).

If $\alpha$ and $\beta$ are alternatives and either can be used to make the same communicative goal, then choose($\alpha$($\beta$).

Understand choose to be a function that forces a choice between its arguments. I've italicized the parts that need to be defined for (28) to turn into something. For (23), those definitions could be:

alternatives = (pronoun, anaphoric definite description)
make the same anaphoric reference to X
choose(pronoun)(definite description) = pronoun
The Repeated Name Penalty, on this view, is the percept we have when a sentence does not honor choose.

The schema in (28) is familiar to linguists from work in pragmatics. It can be awkwardly fit to a way of thinking about scalar implicatures:

(30) I’ve read some papers about the repeated name penalty.

(31) a. alternatives = (some, all)

b. make the sentence it’s in have the truth conditions that
   \[ \lambda P. \lambda Q. \forall x. P(x) = 1 \rightarrow Q(x) = 1 \] would provide

c. choose(some)(all) = all

In this scenario, (31c) conveys information about the speaker’s communicative intention. Even though the situations that can be truthfully characterized by using some are also truthfully characterized by using all – so (30) is true if I read all of the papers about the repeated name penalty – (31) prevents the use of some in just those contexts where that meaning was intended. For this reason, (30) indicates that the speaker intends to convey that I’ve read some, but not necessarily all, of the papers on the repeated name penalty.

In this case, then, we need more than just a choice schema, like that in (31). We also need a way of drawing inferences from (31). For instance, consider these sentences (when said by me):

(32) Some problems in number theory are hard.

   inference: I don’t know that all problems in number theory are hard.

(33) Some of my fingers are twisted.

   inference: not all of my fingers are twisted.

My decision to choose some rather than all in these sentences lets you, the listener, calculate my intent because of (31). That calculation has a different outcome in these two cases, no doubt because of your guess about the relative states of my knowledge concerning digits. We can imagine that a similar calculus is found for anaphora as well. We could wed (29) to a inferencing engine that guides a hearer to conclusions about a speaker’s intent when they choose an anaphoric definite description instead of a pronoun.

Our hope is that by studying the Repeated Name Penalty, we will be able to contribute to a theory about (28). We’d like a theory that tells us what, in general, alternatives are. And we’d like a theory that tells us what choose can be. I believe we can imagine that these two theories will be sufficient to fill in (28b) and give us the inferencing engine. For instance, for the case involving scalar implicatures, a common view is that choose is a special instance of Grice (1991)’s Maxim of Quantity, one clause of which is:

(34) Make your [linguistic] contribution [to a conversation] as informative as is required (for the current purposes of the exchange).

One particular requirement encompassed by (34) could be (35) (see Gazdar 1979),

(35) Do not provide a statement that is informationally weaker than your knowledge of the situation allows.

Suppose we define strength along the lines of (36).

(36) Let p and q be predicates of situations, s. p is weaker than q if
    \[ \{s: s is q\} \subset \{s: s is p\} \]

If we can operationalize (35) so that it is choose(some, all), then this will tell us what communicative goal triggers the choice. That is, it will collapse (31b) into choose.

(37) Be Strong!

   a. alternatives = (some, all)

   b. choose(some, all) = the one that makes the sentence the strongest predicate of situations that is consistent with what the speaker believes is true.

We can also use (35) to derive an inferencing procedure for a listener:

(38) If a speaker has chosen some, then the result of choosing all is not consistent with what she believes is true.

A hearer can draw more particular inferences from (38) based on what the hearer thinks is probable about the speaker’s knowledge. This is what we’re seeing in (32) and (33).

If we think that what we’re seeing in the Repeated Name Penalty belongs to the same kind of process that we are seeing in scalar implicatures, then we can strive to find a way of making the same form that (37) has.

(39) a. alternatives = (pronoun, anaphoric definite description)

   b. choose(pronoun)(definite description) = the one that makes the best anaphoric reference to X.

What we seek is a definition of “best” that chooses a pronoun in those contexts where we find the Repeated Name Condition. When we figure out what “best” is,
we can investigate what inferences a listener might make from how a speaker has deployed choose.

The Repeated Name Penalty is not the only effect that has been taken to be evidence for something like (28). Another is what we might regard as a strengthening of the Repeated Name Penalty: Chomsky’s Principle C.

(40)  
  a. The woman’s son described things that bother her.
  b. ? The woman’s son described things that bother the woman.
  c. The woman described things that bother her.
  d. ?? The woman described things that bother the woman.

A way of formulating Chomsky’s Principle C, the source of the badness of (40d), is (41).

(41)  A anaphoric definite description cannot be c-commanded by a DP if that DP is coreferent with it and in an Argument Position. 

α c-commands β if β is (reflexively) dominated by α’s sister.

(42)  

Evidence that such a syntactic representation is available comes from examples of variable binding, like (43)).

(43)  

\[ \begin{array}{c}
\text{TP} \\
\text{DP}_1 \\
\text{the woman} \\
\text{DP} \\
\text{TP} \\
\text{DP's} \\
\text{DP} \\
\text{T} \\
\text{VP} \\
\text{described} \\
\text{DP} \\
\text{things that bother her} \\
\end{array} \]

(44)  
For a pronoun to be construed as a variable bound by [DP no NP], it must be c-commanded by that binder.

Putting the Argument Position into the mix allows QR to form (42) and still not invoke a Principle C violation if the latter definite description is anaphoric to the first.

Tanya Reinhart had the idea that Principle C is the product of another competition, which I’ll frame with (45). (The best place to see this idea is in Grodzinsky and Reinhart (1993) and Reinhart (2006).)

(45)  
If an anaphoric definite description can be replaced by a variable bound by something in an Argument Position, and the referential dependency remains unchanged, then use the bound variable.

We have to have a very particular, and odd, definition for “bound by something in an Argument position.”

(46)  α is bound by β if [β [λx ... αx ...]]. β is in an A-position if β has a trace in a position assigned a θ-role, and that trace c-commands α.

Reinhart assumes that pronouns, and traces, are the terms that can be bound variables. Thus, if the sentences in (47) express the same anaphora, (45) will prevent the use of the definite description.

(47)  
  a. The woman described things that bother the woman.
  b. The woman, [TP t₁ described things that bother her₁].
Reinhart assumed that non-pronominal definite descriptions could not be bound variables, but that might be incorrect:

(48) No woman₁’s son will describe things that bother the woman₁.

If definite descriptions can be bound variables, then we should re-jigger (45) so that it chooses the pronoun of the two alternatives in (49).

(49) a. The woman₁ [TP t₁ described things that bother the woman₁].
    b. The woman₁ [TP t₁ described things that bother her₁].

(50) Reinhart’s Competition

If an anaphoric definite description can be replaced by a pronoun bound by something in an Argument Position, and the referential dependency remains unchanged, then use the bound pronoun.

Reinhart suggests that this way of understanding Principle C gives a handle on explaining why certain contexts seem to lift the Principle C’s effect. Here are three cases of this kind discussed in Grodzinsky and Reinhart (1993).

(51) a. Only Churchill remembers Churchill giving the speech about blood, sweat, toil, and tears. (Fodor 1975, p. 134)
    b. Everyone has finally realized that Oscar is incompetent. Even HE has finally realized that Oscar is incompetent. (Evans 1980, (52))
    c. I know what Ann and Bill have in common. She thinks that Bill is terrific and he thinks that Bill is terrific. (adapted from Evans 1980:49))

Consider first the second sentence in (51b). The presence of *even* and the associated focus invokes a presupposition, so the message communicated by this sentence can be parsed into two pieces:

(52) a. Oscar has finally realized that Oscar is incompetent.
    b. Oscar is the least likely person to make “λx.x has realized that Oscar is incompetent” true.

Now compare this to the alternative Reinhart’s Competition invokes.

(53) Even HE₁ t₁ has finally realized that he₁ is incompetent.

The two pieces of meaning that this invokes are:

(54) a. Oscar has finally realized that Oscar is incompetent.
    b. Oscar is the least likely person to make “λx.x has realized that x is incompetent” true.

These two sentences don’t have the same meaning. If the difference in their presuppositional parts falls under what “referential dependency” means in (50), then there will be no alternative to (51b) that displaces it.

Something similar is happening in (51c), though in this case presuppositions play no role. The first sentence sets up a context in which the question “What Ann and Bill have in common” is salient. Perhaps, for instance, this can be taken as the Question Under Discussion, which gives shape to the conversation. With this view, the second sentence in (51c) should be construed as making a contribution to the answer of this question. In this case, the question/answer relation is as sketched in (55).

(55) a. QUD: What do Ann and Bill have in common?
    b. ANS: “λx.x thinks that Bill is terrific” holds of Ann and Bill.

Consider what the potential alternative to (the second sentence of) (51c) would be:

(56) a. QUD: What do Ann and Bill have in common?
    b. ANS: “λx.x thinks that Bill is terrific” holds of Ann and Bill.

(56) does not provide an answer to QUD, since it does not provide something that Bill and Ann share; “λx.x thinks that Bill is terrific” is a different predicate than “λx.x thinks that x is terrific.” This is the difference between what is said in (51c) and its alternative.

But it’s a little hard to frame the difference as one in “referential dependency,” as my way of framing Reinhart’s competition in (50) does. If there is a difference in referential dependency in (51c) and its alternative with a bound variable pronoun, it is always present. And yet, we want the removal of a Principle C effect in this example to be dependent on the context set up by the first sentence in (51c). The QUD matters. Compare (51c) to:

(57) A: What do you think about Bill and Ann?
    B: I don’t know them well enough. But I know that she thinks that Bill is terrific and that he thinks that Bill is terrific.

There is a Principle C effect here. The QUD and partial answer are as in (58).

(58) a. QUD: What is thought about Bill and Ann?
    b. ANS: I don’t know anything relevant about Ann, but about Bill, I know that she (=Ann) thinks Bill is horrible and that he (=Bill) thinks Bill is terrific.
The putative alternative is:

(59) ANS: I don't know anything relevant about Ann, but about Bill, I know
that she (=Ann) thinks Bill is horrible and that he1 (=Bill) thinks he1 is
terrific.

This putative alternative has the same difference in referential dependency that we
sketched for (51c), but in this case that difference does not change the answerness
of the sentence. If we frame Reinhart's competition in terms of the contribution
the sentence and its alternative make to the conversation, rather than the nature
of a referential dependency, then we can capture this this case. That is in fact that
Reinhart and Grodzinsky do. I believe Roelofsen (two.zero/one.zero/zero)
is theclearest explication
of this move, so I'll frame it in the way that he did.

(60) Coreference Rule
A speaker will never use a logical form LF in a context C if LF is
semantically indistinguishable from one of its binding alternatives in C.

(61) Binding Alternatives
Let C be a context, let LF be a logical form, and let A and B be two DPs in
LF such that A and B corefer in C and A is in an A-position that
c-commands B in LF. Then, the structure obtained from LF by replacing
B with a pronoun bound by A is called a binding alternative of LF in C.
(Roelofsen 2010, lightly modified definitions 2 & 3, pp 119-20)

This is a system, then, that requires looking not just at the anaphoric relations in
a sentence, but at the more global effect these relations have on the meanings in-
volved. I anticipate that this is going to be a recurring issue. If the communicative
goals are what define the competitions we will look at, how global are those goals.

(62) a. Is the choice of an anaphor determined by what referential
dependencies are being signaled?

b. Is the choice of an anaphor determined by the global meaning of the
utterance containing that anaphor?

The case of scalar implicatures is an instance of (62b). The choice between alterna-
tives is modeled as conforming to an injunction about the global meanings
of sentences: say the strongest thing you know.

Finally, consider (51a).

(51a) Only Churchill remembers Churchill giving the speech about blood,
sweat, toil, and tears.

Interestingly, the alternative to (51a) is ungrammatical.

(63) * Only Churchill1 remembers him1 giving the speech about blood,
sweat, and tears.

So, as given, we should expect no Principle C effect here because there is no alter-
native. But this is a consequence that arises even without the addition of only. So
we should expect (64) to have the same status as (51a).

(64) Churchill remembers Churchill giving the speech about blood, sweat,
toil, and tears.

I am not a person who perceives Principle C effects with names – I hope I am
not alone – so for my English this is a correct outcome. But I feel this is a failing
of the formulation of Principle C we presently have. The effect is found strongest
(only?) when the c-commanding DP is a pronoun. So whereas the contrast in (65)
is slight, the one in (66) is not.

(65) a. Churchill's mother doesn't remember Churchill giving the speech.
b. Churchill doesn't remember Churchill giving the speech.

(66) a. His mother doesn't remember Churchill giving the speech.
b. * He doesn't remember Churchill giving the speech.

If you are like me, then the place to look for whether only is relevant for affecting
the Principle C effect will be in contexts like (67).

(67) Churchill gave his famous speech to an empty meeting of Parliament, so:

a. ? Only HE can remember Churchill giving the speech about blood,
sweat, toil, and tears.
b. * He can remember Churchill giving the speech about blood, sweat,
toil, and tears.

I've brought myself to believe that there is the contrast indicated here. Am I alone?
I don't believe that (67a) is perfect. Indeed, it is predicted to incur a Repeated
Name Penalty. Let's see why next week.

References

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