

Pronouns as Demonstratives*

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Abstract

In this paper, I outline a novel approach to the semantics of natural language pronouns. On this account, which I call *demonstrativism*, pronouns are semantically equivalent to demonstratives. I begin by presenting some contrasts that provide support for demonstrativism. Then I try to explain these contrasts by developing a particular demonstrativist proposal. I build on the “hidden argument” theory of demonstratives (King, 2001, 2008; Elbourne, 2008; Hawthorne & Manley, 2012; Nowak, 2019; Blumberg, 2020). On this theory, demonstratives are semantically similar to definite descriptions, with one important difference: demonstratives take two arguments, rather than one. Using these ideas, I propose that pronouns also take two (covert) arguments, and that the second argument needs to be sufficiently salient to members of the conversation in order for the use of a pronoun to be felicitous. As for the first argument, I maintain that its content is constrained by the process of *noun-phrase* (NP) *deletion* (Elbourne, 2005). Taken together, I argue that these constraints provide us with a satisfying account of the uses to which pronouns are put.

1 Introduction

On straightforward semantics for anaphora, pronouns function in one of two ways. On the one hand, they can refer to individuals and have their referents fixed by antecedent referring expressions or the broader linguistic context. For instance, ‘he’ can refer to John in (1):

- (1) John is playing tennis. So, he is happy.

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On the other hand, they can behave like variables that are bound by quantifier antecedents, e.g. ‘he’ can be bound by ‘every boy’ in (2):

- (2) Every boy thinks he is smart.

However, it is well established that there are pronouns that can neither be interpreted as referential terms nor as regular bound variables. Famous examples include ‘it’ in (3a) and (3b):

- (3) a. Every farmer who owns a donkey beats it.
b. If Pedro owns a donkey, he feeds it hay.

The pronoun in (3a) clearly isn’t referring to any particular donkey, and familiar ways of interpreting it as a variable bound by ‘a donkey’ don’t give the right truth-conditions.¹ Similar points apply to ‘it’ in (3b). Let us follow King & Lewis (2016) and call pronouns that appear in sentences such as (1) and (2) *unproblematic anaphora*, and pronouns that appear in sentences such as (3a) and (3b) *problematic anaphora*.²

Existing treatments of problematic anaphora can be roughly divided into two broad groups: what we can call “variabilist theories” on the one hand, and “descriptivist theories” on the other. Variabilists essentially maintain that problematic anaphora *do* act like bound variables after all. This result is achieved by providing non-standard accounts of other expressions, so that, e.g. existential quantifiers in the antecedents of conditionals have universal force and can bind variables that are outside their syntactic scope.³

By contrast, descriptivists maintain that pronouns are equivalent to “covert” definite descriptions.^{4,5} On these accounts, (3b) can be paraphrased as follows:

¹For instance, consider the following gloss of (3a), where \rightarrow is the material conditional: $\forall x \exists y (\text{farmer}(x) \wedge \text{donkey}(y) \wedge \text{owns}(x, y) \rightarrow \text{beats}(x, y))$. This yields truth-conditions that are trivially weak, for on this interpretation (3a) would be true if there is some object that is not a donkey.

²See (King & Lewis, 2016) and (Nouwen, 2020) for overviews of the problems posed by problematic anaphora.

³The literature on these sorts of approaches is enormous. Some foundational pieces of work in this area include (Kamp, 1981), (Heim, 1982), (Heim, 1983/2008), and (Groenendijk & Stokhof, 1991). See (Nouwen *et al.*, 2016) and (Brasoveanu & Dotlačil, 2020) for recent overviews.

⁴Descriptivism has a fairly long history, and can be traced back to (Quine, 1960) and (Geach, 1962). Other important descriptivist theories include (Cooper, 1979), (Heim, 1990), (Neale, 1990), and (Elbourne, 2005, 2001).

⁵As Mandelkern & Rothschild (2019) point out, this characterization of descriptivism doesn’t clearly distinguish it from variabilism. This is because some variabilist theories also maintain that pronouns and definite descriptions should be given a uniform analysis. The difference is that on these theories descriptions are essentially assimilated to variables.

- (4) If Pedro owns a donkey, he feeds the donkey hay.

The aim of this paper is to outline a different approach to the semantics of anaphora. This approach takes inspiration from a suggestion made in (Abbott, 2002). Abbott observes that pronouns can very often be substituted for *demonstratives* without any change in meaning. For instance, (5a) and (5b) are virtually semantically equivalent to (3a) and (3b), respectively:

- (5) a. Every farmer who owns a donkey beats that donkey.
b. If Pedro owns a donkey, he feeds that donkey hay.

On the basis of examples such as these, Abbott suggests that demonstrative paraphrases of sentences with pronouns are a good ‘guide to their interpretation’, and are ‘a better match for [such] sentences than any other’ (287). However, Abbott doesn’t go very far beyond these suggestive remarks, and states clearly that her demonstrative paraphrase is not being put forward as a proposed analysis of sentences with pronouns. She leaves it as a question for future research whether a semantics for demonstratives can be adapted for anaphora. I take up this question here, and argue that the fact that, e.g. (3a) and (5a) are so similar in meaning is more than just coincidence: pronouns are semantically equivalent to demonstratives. I call this position *demonstrativism*. I will try to show that demonstrativism provides us with a coherent and attractive theory of pronouns.

The first aim of the paper is to present some contrasts that provide support for demonstrativism. More specifically, these contrasts support demonstrativism over what is arguably the most sophisticated descriptivist proposal in the literature, namely the theory of Elbourne (2005). In short, I argue that Elbourne’s theory overgenerates in ways that demonstrativism does not. The relevant data are fairly subtle and have not been considered before. Although they will be discussed in greater detail in §4, let me try to give the reader an immediate sense of the issues here. Consider the contrast between (6a)-(6b) on the one hand, and (6c) on the other:

- (6) a. ?? In many aquariums, most eels are brightly colored, but in Ben’s fish tank, it looks rather dull.
b. ?? In many aquariums, most eels are brightly colored, but in Ben’s fish tank, that eel looks rather dull.
c. In many aquariums, most eels are brightly colored, but in Ben’s fish tank, the eel looks rather dull.

So, what is distinctive about descriptivism is that pronouns are assimilated to definite descriptions, *where definite descriptions are given a classical analysis*. Since this point is made clear in §2, I have opted for the simpler, though less precise, formulation of descriptivism here.

Although (6c) is acceptable, (6a)-(6b) are not (as indicated by the ‘??’ preceding the example). In response to the latter, one is tempted to ask something like ‘What are you talking about?’, or ‘Which eel are you referring to?’. However, since Elbourne’s theory essentially assimilates pronouns to definite descriptions, it predicts that (6a) should be acceptable since (6c) is. By contrast, by assimilating pronouns to demonstratives, and thus making (6a) roughly equivalent to (6b), demonstrativism does better with these examples.

The second aim of the paper is to try to account for why exactly (6a) and (6b) are infelicitous. I will develop the line of explanation that I find most promising, but also identify some areas for future work. My account begins with a background theory of demonstratives. I focus on the so-called “hidden argument” approach (King, 2001, 2008; Elbourne, 2008; Hawthorne & Manley, 2012; Nowak, 2019; Blumberg, 2020). On this theory, the demonstrative determiner is semantically similar to the definite determiner, with one important difference: the demonstrative determiner takes an additional, covert argument.⁶ I will suggest that the infelicity of (6b) derives from a *salience requirement* on the demonstrative’s covert argument (Hawthorne & Manley, 2012). Using these ideas, I propose that pronouns are just like demonstratives, except *both* of the pronoun’s arguments are covert. In particular, the second argument needs to be sufficiently salient to members of the conversation in order for the use of a pronoun to be felicitous, which explains why (6a) is unacceptable. As for the first argument, I maintain that its content is constrained by the process of *noun-phrase (NP) deletion* (Elbourne, 2005).

To be clear, my aims in the paper are relatively modest. Although I discuss at length how my account compares to existing descriptivist proposals, I will have little to say that is of direct consequence for variabilist approaches. That being so, and although I don’t intend to provide a detailed critique of variabilism here, I want to record that my focus is at least *prima facie* justified. First, variabilism is predicated on problematic anaphora being bound, and thus having linguistic antecedents. However, as several theorists have observed, such antecedents are not always available:

Context: A new faculty member picks up her first paycheck from her mailbox. Waving it in the air, she says to a colleague:

- (7) a. Do most faculty members deposit it in the Credit Union? (Jacobson, 2000, 89, fn.12)
- b. John gave his paycheck to his mistress. Everybody else put it in the bank (Cooper, 1979).

⁶The name *hidden argument* for referring to this class of views comes from Nowak (2019).

As Elbourne (2005) points out, ‘it’ in (7a) means something like “for most faculty members x ... x ’s paycheck...”. However, there is no obvious linguistic antecedent that could generate this covarying interpretation for the variabilist, so it is unclear how they could handle this case. Similar remarks apply to (7b).⁷

Second, even when there are linguistic antecedents, the available binding relations do not always generate the right readings. Consider the following examples:

- (8) a. Hob thinks a witch has blighted Bob’s mare, and Nob wonders whether she killed Cob’s sow (Geach, 1967).
- b. Bill suspects that a unicorn ate his flowers, and Mary thinks it trampled her rosebush too.

Even though syntactic scope and semantic scope come apart on variabilist theories, it is still the case that indefinites in the scope of one attitude verb cannot bind variables in the scope of another. Thus, the only reading that such theories make available for (8a)-(8b) is one where the indefinite takes wide-scope. But this requires that the speaker be committed to the existence of witches and unicorns, which is problematic.

It is worth observing that descriptivist and demonstrativist accounts can handle (7)-(8) fairly easily. For instance, (7a) and (8a) are virtually equivalent to (9a) and (9b), respectively:

- (9) a. Do most faculty members deposit their cheque/this in the Credit Union?⁸
- b. Hob thinks a witch has blighted Bob’s mare, and Nob wonders whether the witch/that witch killed Cob’s sow.⁹

⁷Also see (Nouwen, 2020) for a discussion of the problem that these so-called “paycheck pronouns” pose for the variabilist. Hardt (1999) and more recently Keshet (2018) attempt to develop broadly variabilist theories that can handle paycheck pronouns. See (Elbourne, 2005) for a critique of Hardt’s account. Keshet’s theory is complex, and I don’t have the space to discuss it in detail here. In short, he tries to capture paycheck pronouns by introducing a new type of variable into his semantic system: apart from individual variables, he also has variables whose semantics is essentially that of definite descriptions raised to the type of generalized quantifiers. Thus, it is unclear to what extent Keshet’s theory really provides an alternative to descriptivism. Indeed, one could argue that straightforward descriptivist proposals do better here on grounds of parsimony. (Elbourne raises a similar complaint against Hardt’s account.) It is also worth remarking that neither Hardt nor Keshet’s theory can handle examples such as (8).

⁸The demonstrative variant of (9a) with ‘that’ rather than ‘this’ is infelicitous. Presumably this is due to the proximal/distal features of demonstratives. I don’t consider these features here, but see (Elbourne, 2008) for a detailed discussion of them.

⁹Variabilists have given cross-attitudinal anaphora such as those in (8) relatively little

Overall, and assuming that we aren't moved to say that pronouns are ambiguous, I think that these examples give us reason to take seriously approaches that do not treat problematic anaphora as akin to bound variables.¹⁰

The paper is structured as follows. In §2 I present Elbourne's descriptivist theory. In §3 I consider a popular objection to descriptivism, and argue that Elbourne's account has the resources available to provide a principled response. However, in §4 I present a new challenge for Elbourne's theory. In §5 I develop my positive account on which pronouns are equivalent to demonstratives, and show how it improves on descriptivism. §6 discusses donkey anaphora and the problem involving uniqueness that they give rise to. Finally, §7 briefly concludes.

2 Descriptivism

In this section, I present descriptivism in more detail and outline some of the main challenges for the approach (§2.1), then I introduce Elbourne's NP-deletion based theory (§2.2).

2.1 The general descriptivist approach

To understand descriptivism better, it will be helpful to have an account of definite descriptions on the table. There are various analyses of descriptions in the literature, and it won't particularly matter which we choose.¹¹ Since it is fairly straightforward, and the descriptivist account that we will focus on assumes it, I will present a Fregean analysis of 'the'. On this theory, the definite article takes one argument of noun-phrase type:

(10) [the F]

attention. However, Lanier (2013, 2014) makes a careful study of them and ultimately concludes that a descriptivist treatment of them is well motivated. As far as I can tell, all of Lanier's arguments carry over to the demonstrativist approach that I develop here.

¹⁰Schlenker (2011a) uses data from sign language to argue that when it comes to so-called "bishop sentences" (e.g. 'If a bishop meets a bishop, he blesses him' (Heim, 1990)), variabilist accounts fare better than descriptivist theories. I don't have the space to discuss Schlenker's arguments here, but it is worth remarking that bishop sentences seem to pose a problem for variabilists as well (Schlenker, 2011b). I also note that these points against variabilism don't carry over to the "variable free" account of Jacobson (2000), or the "functionalist" approach of Dekker (2012). A careful assessment of these theories will have to wait for a future occasion.

¹¹As far as I can tell, the arguments to follow don't hang on which particular semantics for descriptions we adopt, so long as this semantics is classical in the sense that it posits existence and uniqueness conditions (see fn.5). For instance, we could have chosen a broadly Russellian, quantificational account.

Semantically, ‘the’ is given the following lexical entry:¹²

Fregean analysis of *the*

$\llbracket the \rrbracket = \lambda f \in D_{\langle e,t \rangle} : \text{there is exactly one } x \text{ such that } f(x) =$

1. the unique y such that $f(y) = 1$ ¹³

On this account, $\llbracket the F \rrbracket$ is defined just in case there is exactly one thing to which F applies; and if there is exactly one thing to which F applies, it denotes this very individual. Otherwise, the description will have no semantic value. Definite descriptions effectively trigger a presupposition that there is exactly one thing to which F applies. For instance, ‘The author of *Blood Meridian* is tall’ carries a presupposition that there is a unique author of *Blood Meridian*, and it is true just in case that individual is tall.

As mentioned in §1, descriptivists effectively treat pronouns as covert definite descriptions, so that (3b) is equivalent to (4) (both sentences are repeated from above):

(3b) If Pedro owns a donkey, he feeds it hay.

(4) If Pedro owns a donkey, he feeds the donkey hay.

This treatment of (3b) raises two issues for the descriptivist. The first involves the uniqueness requirements of definite descriptions. Suppose that Pedro owns more than one donkey, and feeds all of them hay. Intuitively, (3b) is true in this scenario. However, on standard analyses of definite descriptions, it seems that (3b) will be true only if there exists exactly one donkey in the universe. For instance, on the Fregean analysis, it appears that (3b) will suffer from presupposition failure, since ‘the donkey’ will have no semantic value. It is no help to maintain that the pronoun should be interpreted as ‘the donkey Pedro owns’, since as we just observed, (3b) can be true even when Pedro owns more than one donkey. In short, the uniqueness conditions imposed by standard analyses of definite descriptions do not seem to sit well with the ways in which pronouns are put to use.

The most popular response to the above problem of uniqueness is to appeal to so-called “situation semantics”. Given appropriate stipulations, this semantics allows one to, e.g. evaluate the consequent of (4) relative to a

¹²The lexical entry to follow is similar to the one presented in (Heim & Kratzer, 1998). Also see (Elbourne, 2013) for a thorough discussion of the Fregean analysis of definite descriptions.

¹³The lambda binder ‘ λ ’ is a device for forming functions. More specifically, a lambda-term $\lceil \lambda \alpha : \phi. \delta \rceil$ is to be understood as “the smallest function which maps every α satisfying ϕ to δ ”. ϕ is the *domain condition*, and is introduced by a colon; while δ is the *value description*, and is introduced by a period. See (Heim & Kratzer, 1998, , ch.2.5) for further discussion.

“minimal situation” containing exactly one donkey (Heim, 1990; Elbourne, 2005, 2008, 2010, 2016). In this way, the uniqueness requirements carried by the definite will be satisfied. I will discuss this response in detail in §6, since a similar concern regarding uniqueness is raised by the demonstrativist account that I present in §5.3.

The second issue raised by the descriptivist treatment of anaphora is how exactly the content of the covert description gets determined. For instance, ‘it’ in (3b) is interpreted as ‘the F ’, where F is ‘donkey’ or ‘donkey Pedro owns’. But why should F take this value? It might be thought that the descriptivist can simply appeal to context here: the relation *donkey-owned-by-Pedro* is made salient by material in the antecedent of the conditional, which explains why the description takes the value that it does (Heim & Kratzer, 1998). However, several theorists have pointed out that there is a serious difficulty with allowing context to wholly determine the content of the covert description. As Heim (1982) and others have observed, pronoun licensing requires more than just the existence of a contextually salient relation.¹⁴ Consider the contrast between (11a) and (11b):

- (11) a. Every married man is sitting next to his wife.
 b. ?? Every married man is sitting next to her.

Although (11a) is acceptable, (11b) is not. However, it seems uncontroversial to assume that the *married-to* relation is made salient by mention of the word ‘married’ in (11b). So, we would expect (11b) to be felicitous if the content of the covert description was simply determined by context. Heim (1990) called this the problem of the “formal link” for descriptivist treatments of anaphora: there needs to be some kind of link between the material in the description that “goes proxy” for the pronoun, and the pronoun’s antecedent.¹⁵

2.2 Elbourne’s (2005) account

Descriptivists have responded to the problem of the formal link by placing *syntactic constraints* on the content of covert descriptions. In particular, Elbourne (2005) maintains that pronouns are semantically equivalent to the definite determiner, e.g. $\llbracket it \rrbracket = \llbracket the \rrbracket$.¹⁶ Furthermore, the content of the

¹⁴Heim credits this observation to Barbara Partee. The ‘married man’ minimal pair is taken from (Heim, 1990). Also see §4.1.

¹⁵Mandelkern (forthcoming) considers some patterns involving the way definite descriptions and pronouns interact with negation, and argues that they pose a problem for descriptivism. I leave an examination of Mandelkern’s data for a future occasion. But it is worth noting that (Lewis, 2021a) makes a careful study of the way negation interacts with anaphora, and concludes that they are consistent with a broadly descriptivist treatment.

¹⁶Here and in what follows I will ignore so-called “phi-features” of pronouns, e.g. that the object denoted by the pronoun ‘it’ must be neuter.

covert description is constrained by the process of *noun-phrase* (NP) *deletion*. The phenomenon of NP-deletion is exhibited in the following sentences:

- (12) a. I like Bill’s wine, but Max’s is even better.
b. All men are mortal, but few are loyal.

In (12a), what is expressed is that Max’s *wine* is to my liking—the noun phrase ‘wine’ which appears in the first conjunct has been elided in the second conjunct. Similarly, in (12b) what is expressed is that few *men* are loyal.

As Elbourne (2013, , 193-194) makes clear, it is perfectly compatible with his approach that NP-deletion is itself the product of several processes. All that he is concerned with establishing is that the ‘NP-deletion processes...posited for pronouns...have parallels in NP-deletion after common-or-garden determiners’. That is, all that matters for Elbourne’s purposes is that NP-deletion is an independently attested phenomenon; how exactly that phenomenon works is not his primary concern.

That said, Elbourne maintains that there are some constraints on NP-deletion that can generally be observed. In particular, that there are two conditions under which NP-deletion is allowed: either (i) when there is a linguistic antecedent, e.g. in (12a); or (ii) when something in the immediate environment can be relied on to provide content, e.g. ‘a visitor being enthusiastically leaped on by his host’s dog might...say “mine does the same thing”, even if no mention has been made of the word *dog*’. Elbourne maintains that there are strict constraints on when linguistically-based NP-deletion is possible: ‘it is not possible...to reconstruct a suitable NP from the linguistic context alone if it has not actually occurred explicitly’ (44). For instance, in a context where it is not commonly known that there are husbands in the immediate environment, (13) is unacceptable:

- (13) ?? Mary is married, and Sue’s is the one drinking a martini

Even though the relation expressed by ‘husband’ has been made salient by the first conjunct in (13), NP-deletion isn’t possible since the the word doesn’t occur explicitly.¹⁷ According to Elbourne, this also explains why (11b) (‘Every married man is sitting next to her’) is unacceptable.

As for (3b) (‘If Pedro owns a donkey, he feeds it hay’), ‘donkey’ occurs explicitly and is available for NP-deletion, as (14) shows:

¹⁷Note that the second conjunct of (13) *is* acceptable in a context where it is commonly understood that there are husbands in the immediate environment, e.g. at a bring-your-husbands-to-work mixer held at the all-female firm where Sue works.

- (14) If Pedro owns a donkey, he will buy one more at the market tomorrow.

What (14) communicates is that if Pedro owns a donkey then he will buy one more *donkey* at the market (perhaps it's common knowledge that donkeys like company). Thus, on Elbourne's account 'it' is equivalent to 'the donkey' in (3b).

3 A popular objection

Before I present a challenge for Elbourne's theory, it is worth considering an objection to descriptivism that many theorists have raised. I argue that Elbourne's account has the resources to respond to this worry.

The problem of the formal link is essentially a worry about descriptivism being too liberal in assigning content to covert descriptions. In response, descriptivists have put forward constraints on the content of covert material, e.g. NP-deletion. However, many authors have argued that descriptivists are then bound to suffer from what is, in some sense, the opposite problem: the chosen constraints will inevitably rule out some perfectly acceptable sentences (Strawson, 1952; van Rooy, 2001; Lewis, 2013; Santorio, 2013). That is, it has been argued that descriptivist accounts are too *strict*. To my mind, the strongest form of this worry comes from Santorio (2013, 47):

Stockbroker: Jason sees a man wearing an elegant business suit jump off the edge of a tall building overlooking Wall Street. Jason assumes that the individual is a suicidal stockbroker. But the man is actually a professional stuntman who's training for his next performance.

- (15) Jason believes that a stockbroker jumped off a building. But he was actually not a stockbroker, but a stuntman.

The problem is that it is difficult to see how 'he' could be a covert definite description without contravening the relevant constraints on descriptive content. There does appear to be a challenge for Elbourne's account here. His theory seems to make (15) equivalent to the absurd (16):

- (16) Jason believes that a stockbroker jumped off a building. But *#the stockbroker* was actually not a stockbroker, but a stuntman.

There simply do not seem to be any suitable noun phrases available in the antecedent linguistic material of (15) to support Elbourne’s NP-deletion based theory.¹⁸

Although I think that there is a real puzzle here, I don’t think that (15) poses a problem for Elbourne’s account. The response I have in mind rests on an observation by Lanier (2013, , 117, fn.17). In the course of arguing for a descriptivist account of cross-attitudinal anaphora, Lanier gestures towards sentences such as the following:

- (17) Hob thinks a bachelor has been wooing the village women, but Nob thinks he might not be a bachelor but rather a married man.

In suitable contexts, there appear to be good readings of (17). However, Elbourne’s NP-deletion based account seems to predict that (17) is equivalent to the problematic (18):

- (18) Hob thinks a bachelor has been wooing the village women, but Nob thinks # *the bachelor* might not be a bachelor but rather a married man.

Assuming that ‘the bachelor’ takes narrow scope with respect to the attitude verb, this makes Nob incoherent.

What is important for us is how Lanier responds to cases such as (17). He argues that they raise a *general* problem for attempts to spell out the constraints on NP-deletion, and do not pose a particular problem for Elbourne’s theory. He mentions the following discourse:

- (19) Hob believes many jumpers looked angry as they fell. Nob believes some didn’t jump, but were pushed.

Everyone, not just proponents of Elbourne’s account, should agree that NP-deletion occurs here (after ‘some’). However, for familiar reasons the elided noun-phrase cannot be ‘jumpers’. Lanier’s thought is that whatever explains what is going on in (19) will explain what is going on in (17).

I suggest that Elbourne can make a similar move with regard to (15). Consider (20) in the context of *Stockbroker 2*:

¹⁸The prospects of denying that ‘he’ in, e.g., (15) is a problematic anaphor are dim. Clearly, the pronoun isn’t behaving like a bound variable. Moreover, as Santorio (2013, , 48-49) points out, analogous reports that do not involve a linguistic antecedent for ‘he’ are unacceptable, for example: ‘Jason believes that three stockbrokers have jumped off a building and only two have survived. ??He has actually survived too (and he’s not a stockbroker).’ This is unexpected if ‘he’ is being used deictically in (15).

Stockbroker 2: Jason sees ten men who are each wearing an elegant business suit jump off the edge of a tall building overlooking Wall Street. Jason assumes that each individual is a suicidal stockbroker. But three men are actually professional stuntmen training for their next performance.

- (20) Jason believes that ten stockbrokers jumped off a building. But some weren't actually stockbrokers, but stuntmen.

Everyone should agree that NP-deletion occurs here (after 'some'). But once more we do not appear to have an appropriate noun-phrase that can be elided—the most obvious candidate gives us the absurd (21):

- (21) Jason believes that ten stockbrokers jumped off a building. But *#some stockbrokers* weren't actually stockbrokers, but stuntmen.

Here is another example to the same effect:

Ferrari: Jason is one of several partners at a prestigious law firm. He sees some cars parked in the partners' garage. Jason doesn't know much about cars and assumes that they are all Ferraris. Fred is one of Jason's partners at the firm. As it happens, Fred's car is a Lamborghini, not a Ferrari.

- (22) Jason thinks he's looking at a parking lot filled with Ferraris. But a few are actually Lamborghinis.

My diagnosis of cases such as (20) and (22) is that NP-deletion is less constrained than Elbourne suggests: context can sometimes provide content even when there is nothing in the immediate environment that can be relied on to do so. For instance, what seems to have been deleted in the second conjunct of (20) is the noun phrase 'individuals who Jason takes to be stockbrokers'—a noun-phrase which, given the scenario of *Stockbroker 2*, has arguably been made salient in context. Admittedly, it is unclear when exactly this sort of NP-deletion is allowed, or why it should work like this. However, Elbourne ought not be expected to provide a complete account of NP-deletion, nor does he purport to do so.

In short, whatever story we tell about (20) can be used by Elbourne to respond to cases such as (15). Elbourne is within his rights to claim that although these cases raise a general puzzle about NP-deletion, there is no particular problem for his brand of descriptivism.¹⁹

¹⁹Note that one cannot construct cases analogous to (15) with possessives:

4 A new challenge

In the previous section, I defended Elbourne’s account from a popular objection to descriptivism. In this section, I pose a challenge of my own. I argue that Elbourne’s NP-deletion based theory overgenerates: there are sentences that this account predicts to be acceptable but intuitively are not.

4.1 The challenge

Let us begin by considering the following example from Barbara Partee (cited as personal communication by Heim (1982)):

- (24) ?? I dropped ten marbles and found only nine of them. It is probably under the sofa.

(24) makes a similar point to (11b) (‘Every married man is sitting next to her’) from §2: pronoun licensing is a delicate business; it isn’t sufficient for a pronoun to be licensed that there is exactly one object satisfying the relevant descriptive conditions in context. But it is not obvious that (24) poses a problem for Elbourne’s account, since (25) is also rather odd:

- (25) ?? I dropped ten marbles and found only nine of them. One is probably under the sofa.²⁰

However, one can construct variants of Partee’s case that more clearly raise a challenge for Elbourne’s theory. Consider the following examples:

- (26) a. ?? At most of the town’s Halloween parties, many witches left early, but at Tom’s party, she left late.
b. At most of the town’s Halloween parties, many witches left early, but at Tom’s party, the witch left late.
- (27) a. ?? In many aquariums, most eels are brightly colored, but in Ben’s fish tank, it looks rather dull.
b. In many aquariums, most eels are brightly colored, but in Ben’s fish tank, the eel looks rather dull.

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- (23) A: Did you hear that the judges preferred Bill’s wine to Max’s?
B: ?? Yes, but Max’s wasn’t wine, it was whiskey.

The relevant generalization seems to be that one can construct analogous cases with all expressions that involve an argument for a domain of quantification. Why there should be this contrast between determiners and possessives is unclear at present.

²⁰Determiners that take plural complements are fine here, e.g. ‘Some are red’. But this patterns with Elbourne’s account, since plural pronouns are also fine, e.g. ‘They are red’.

- (28) a. ?? At many restaurants, some waiters are unfriendly, but at Cheesy Dreams, he’s nice.
 b. At many restaurants, some waiters are unfriendly, but at Cheesy Dreams, the waiter is nice.

There is a marked contrast between the (a) and (b) sentences of each pair: although the latter are acceptable, the former are not. For example, upon hearing (26a), one wants to ask something like ‘What do you mean by “she”?’ or ‘Who are you referring to?’.

However, Elbourne’s account predicts that there *should* be good readings of the (a) sentences. For instance, ‘witch’ appears to be available for NP-deletion in (26a), as the following sentences show:

- (29) a. At most of the town’s Halloween parties, many witches left early, but at Tom’s party, one left late.
 b. At most of the town’s Halloween parties, many witches left early, but at Tom’s party, more than one left late.

Each sentence is acceptable, and in each case ‘witch’ has been elided in the second conjunct. In particular, notice that the number feature of ‘witches’, i.e. the fact that it is plural, doesn’t make it inappropriate for NP-deletion to determiners that take singular complements. After all, ‘one’ only takes singular complements. Thus, there seems to be no bar to NP-deletion taking place in (26a). Similarly, one can verify that NP-deletion makes available ‘eel’ and ‘waiter’ in (27a) and (28a), respectively.²¹

We should be clear about what exactly the problem is here. On the descriptivist account that we are assuming, a definite description ‘the *F*’ triggers a presupposition that exactly one individual is *F*. Generally, if a sentence ϕ carries a presupposition χ , and χ isn’t taken for granted by the participants in a conversation, then uttering ϕ will result in infelicity. For instance, an utterance of ‘The King of France is bald’ will generally be unacceptable if it is not common knowledge that there is exactly one King of France (Strawson, 1950). However, in some cases presuppositions can be “accommodated”: sometimes when a presupposition isn’t taken for granted before uttering a

²¹Also observe that ‘witch’ is available for NP-deletion in (30a), as (30b)-(30c) illustrate:

- (30) a. ?? At most of the town’s Halloween parties, every witch left early, but at Tom’s party, she left late.
 b. At most of the town’s Halloween parties, every witch left early, but at Tom’s party, one left late.
 c. At most of the town’s Halloween parties, many witches left early, but at Tom’s party, more than one left late.

sentence that carries this presupposition, it can be added to the stock of common beliefs *after* the utterance.²² For instance, even if it isn't taken for granted that I have a sister, it is acceptable for me to say 'My sister is coming round for dinner tonight'. Upon hearing this, you will come to think that I have a sister: the presupposition that I have a sister has been accommodated.

In (26)-(28), it was not specified that there was exactly one individual that satisfies the relevant conditions. For example, in (26) it was not specified that there was exactly one witch at Tom's party. So, upon hearing (26b) we accommodate this presupposition. It might be thought that the difficulty with, e.g. (26a) is that accommodation is more difficult to achieve: upon hearing (26a) it is harder to add to the stock of common beliefs the claim that at Tom's party there was exactly one witch.

If accommodation was the issue, then the descriptivist would need to appeal to independently justified principles governing accommodation in order to explain the contrasts. However, it is unclear what these principles could be. For instance, it cannot be that accommodation is only triggered when the relevant definite features an overt noun-phrase. As mentioned in §2.2, Elbourne (2005, , 44) allows NP-deletion to occur 'when something in the immediate environment can be relied on to provide content'. Suppose I point to a picture of a witch in a book and utter (31):

(31) At Tom's party, she danced like a lunatic.

Presumably, (31) is acceptable because the overall effect of my pointing is to contribute the predicate 'witch' to the descriptive material of the pronominal definite. In that case, we are able to accommodate the assumption that there was a unique witch at Tom's party. But of course there is no overt noun-phrase here.²³

Even if we just focus on linguistically-based NP-deletion, it cannot be that accommodation is only triggered when there is an overt noun-phrase. It is widely assumed that the determiner 'most' triggers a presupposition that its domain is non-empty (Heim, 2011). Now consider (32):

(32) At some of the town's Halloween parties, many witches left early, but at Tom's party, most left late.

²²The basic observation here goes back at least to Karttunen (2009). See (von Stechow, 2004) for a more recent discussion.

²³Or consider an utterance of 'In our household we park it in the garage' while pointing to a picture of a car. Here we easily accommodate the assumption that the speaker only owns one car.

It follows that the second conjunct here carries a presupposition that there were witches at Tom’s party. Clearly, this presupposition is accommodated even though there is no overt noun-phrase. Similarly, even when the determiner triggers presuppositions about the precise cardinality of the denotation of its complement, accommodation is possible:

- (33) a. John’s bike is in the garage, but Bill’s is in the shed.
 b. At most of the parties, many witches left early, but at Tom’s party, all five left late.

In (33a), there is NP-deletion of ‘bike’ after ‘Bill’s’. It is generally taken that possessive constructions are equivalent to definite descriptions, so that the second conjunct of (33a) means ‘The bike belonging to Bill is in the shed’ (Elbourne, 2005). As for (33b), the quantifier ‘All five *F*’ triggers a presupposition that there are exactly five individuals who are *F*. But clearly linguistically-based NP-deletion is possible here, so that the second conjunct of (33b) means ‘All five witches at Tom’s party left late’.²⁴ In short, without simply stipulating the contrast that needs to be accounted for, I am unaware of any principles governing accommodation that could explain the facts.

In any event, I do not believe that the target contrasts can be wholly attributed to differences in the ease with which presuppositions are accommodated. Even if it is already taken for granted that there was exactly one witch at Tom’s party, the relevant sentences are still unacceptable. Consider the following dialogue:

- (35) Me: Can you tell me more about the guests at Tom’s party?
You: Well, people dressed as either witches or wizards. More precisely, there were ten guests in total and nine wizards there.
Me: I see. Did the witches generally stay late at the parties?
You: ?? At most of the parties, many witches left early, but at Tom’s party, she left late. [= (26a)]
 (cf. You: At most of the parties, many witches left early, but at Tom’s party, the witch left late. [= (26b)])

²⁴Some informants report awkwardness in similar constructions involving ‘both’:

- (34) % At most of the parties, many witches left early, but at Tom’s party, both left late.

For myself, and several other informants, (34) is perfectly acceptable (thus the ‘%’ symbol). What accounts for this variation in judgments deserves further attention. But even if we suppose that (34) is unacceptable, could the descriptivist respond by saying that ‘she’ is like ‘both’, and that whatever explains the badness of (34) can explain what’s going on with examples that feature pronouns? I don’t think so, since I am told that whatever oddness there is in (34) disappears when it is commonly accepted that there were exactly two witches at Tom’s party (see fn.25). But this isn’t the case for the examples that feature pronouns, as I show below.

In this scenario, it is commonly accepted that there was exactly one witch at Tom's party. However, there is still a significant contrast between (26a) and (26b). This suggests that the issue here does not concern accommodation.²⁵

In summary, Elbourne's account overgenerates: it predicts that sentences such as (26a), (27a), and (28a) should be acceptable, but they aren't. It is tempting to try explain the relevant contrasts by appealing to principles governing accommodation. However, it is unclear what these principles could be. Moreover, the target sentences are infelicitous even when the relevant presuppositions are commonly accepted. This suggests that the problem isn't essentially about accommodation. I conclude that the challenge for Elbourne's theory is robust: NP-deletion doesn't provide satisfactory constraints on descriptive material when pronouns are taken to be semantically equivalent to definite descriptions.

4.2 Further constraints?

The most obvious response to the problem posed in the previous section either places further syntactic constraints on the content of covert descriptions in addition to NP-deletion, or posits a different set of constraints altogether. However, this move faces at least two serious challenges.

The first is outlined by Elbourne (2005, , 65-66) himself: 'the difficulty is in making the necessary procedure natural and...independently justified'. In order to be empirically adequate, it is likely that the posited constraints will have to be rather complex. But complex constraints that have no application outside of a descriptivist theory of anaphora are ad hoc. Even if they can account for the relevant data, they tend to bring into question the descriptivist program rather than provide support for it. That complex, highly specific constraints need to be appealed to indicates that pronouns *aren't* descriptions, and that descriptivists are on the wrong track. Indeed, Elbourne (2005, 68) emphasizes that the fact that his theory only employs NP-deletion is one of its major selling points. As we saw in §3, how exactly NP-deletion functions is far from obvious, but it is an independently attested phenomenon.

²⁵Also consider the following dialogue:

- (36) Me: Can you tell me more about the guests at Tom's party?
You: Well, people dressed as either witches or wizards. More precisely, there were ten guests in total and eight wizards there.
Me: I see. Did the witches generally stay late at the parties?
You: At most of the parties, many witches left early, but at Tom's party, both left late.

(34) is acceptable here. This suggests that any awkwardness with this construction in the original scenario is due to the ease with which its presupposition is accommodated.

The second challenge involves the interaction between further/replacement constraints and the descriptivist’s ability to handle the data considered in §3. Whatever new constraints are posited, the descriptivist needs to ensure that (15) doesn’t take the same meaning as (16), or something equally absurd (both sentences are repeated from above):

- (15) Jason believes that a stockbroker jumped off a building. But he was actually not a stockbroker, but a stuntman.
- (16) Jason believes that a stockbroker jumped off a building. But *#the stockbroker* was actually not a stockbroker, but a stuntman.

More generally, the descriptivist needs to make sure that any gains that were made by appealing to NP-deletion aren’t lost when additional constraints on pronoun licensing are posited.

To make these challenges vivid, let us briefly consider Heim’s (1990) attempt to deal with the problem of the formal link, i.e. the constraints that she imposes. After Elbourne’s (2005), these are arguably the most sophisticated descriptivist constraints on pronoun licensing that have been formulated. Essentially, Heim requires that the material comprising the antecedent and the antecedent’s scope be reconstructed into the position of the pronoun. Thus, (26a) is equivalent to the following:

- (37) *#* At most of the town’s Halloween parties, many witches left early, but at Tom’s party, *the witch that left early* left late.

(37) is incoherent, which does explain why (26a) should be unacceptable. However, this doesn’t really solve the problem, since the account predicts that the unacceptable (38a) should be equivalent to (38b):

- (38) a. ?? At most of the town’s Halloween parties, many witches left early, and at Tom’s party, she left earlier than anybody else.
- b. At most of the town’s Halloween parties, many witches left early, and at Tom’s party, the witch that left early left earlier than anybody else.²⁶

Moreover, Heim’s constraints require that the material comprising the antecedent (and the antecedent’s scope) gets reconstructed in the position of the pronoun. Thus, ‘he’ in (15) gets interpreted as ‘the stockbroker that jumped off a building’, which makes the sentence incoherent.²⁷ So, the gains

²⁶Thanks to Simon Goldstein for helpful discussion here.

²⁷Heim (1990, , 172-173) notes that a similar problem arises for her account in relation to an example from Strawson (1952).

that were made by appealing to NP-deletion are lost if Heim's constraints are employed.

To sum up, a straightforward response to the problem raised in §4 is to posit further constraints on pronoun licensing. However, this move brings with it at least two further challenges: (i) making the necessary constraints independently justified; and (ii) ensuring that the resulting account can accommodate Santorio discourses. Satisfying both (i) and (ii) is no trivial matter.

In the next section, I develop my positive account of anaphora on which they are semantically equivalent to demonstratives. I will show that this theory retains many of the valuable features of Elbourne's account, but also provides a response to the overgeneration worry raised here.

5 Demonstrativism

5.1 「that *F*」 and 「the *F*」

Let us begin by observing that demonstratives pattern with pronouns and not definite descriptions in our problematic sentences:

- (39) a. ?? At most of the town's Halloween parties, many witches left early, but at Tom's party, that witch left late.
b. At most of the town's Halloween parties, many witches left early, but at Tom's party, the witch left late.
- (40) a. ?? In many aquariums, most eels are brightly colored, but in Ben's fish tank, that eel looks rather dull.
b. In many aquariums, most eels are brightly colored, but in Ben's fish tank, the eel looks rather dull.
- (41) a. ?? At many restaurants, some waiters are unfriendly, but at Cheesy Dreams, that waiter is nice.
b. At many restaurants, some waiters are unfriendly, but at Cheesy Dreams, the waiter is nice.

As with its counterpart featuring a pronoun, one is moved to respond to (39a) by asking 'Who are you referring to?' or 'Which witch are you talking about?'. Interestingly, this pattern continues *even when it is assumed that there was exactly one witch at Tom's party*:

- (42) Me: Can you tell me more about the guests at Tom's party?
You: Well, people dressed as either witches or wizards at Tom's party.

More precisely, there were ten guests in total and nine wizards there.
Me: I see. Did the witches generally stay late at the parties?
You: ?? At most of the town’s Halloween parties, many witches left early, but at Tom’s party, that witch left late. [= (39a)]
(cf. You: At most of the town’s Halloween parties, many witches left early, but at Tom’s party, the witch left late. [= (39b)])

The contrasts in, e.g. (39)-(41) suggest the following possibility: pronouns and demonstratives are semantically very closely related. More specifically, they suggest that we should not be taking pronouns to be equivalent to covert definite descriptions—as descriptivists do—but rather covert demonstratives. I call this position *demonstrativism*.

To repeat: the contrasts considered here and in §4.1 are significant, not least because they provide support for demonstrativism over descriptivism. But we do not yet have an account of *why* these patterns hold. In the rest of this section, I try to provide such an explanation by developing a particular demonstrativist proposal. I will present the type of analysis that I find most promising, but also identify some areas for future work. First, I introduce a semantics for demonstratives which attempts to account for their infelicity in (39)-(41) (§5.2). Then I adapt this analysis for pronouns (§5.3).

5.2 Demonstratives

The theory of demonstratives that I will present here is the so-called “hidden argument” approach, variants of which have been developed by several theorists (King, 2001, 2008; Elbourne, 2008; Hawthorne & Manley, 2012; Nowak, 2019; Blumberg, 2020). On this account, the demonstrative determiner is semantically similar to the definite determiner, with one important difference: the demonstrative determiner takes an additional, covert argument.²⁸

There are several ways of implementing the hidden argument account. For simplicity, let us again assume a broadly Fregean account. The idea, then, is that the demonstrative determiner takes two arguments of noun-phrase type:

(43) [that $F X$]

²⁸Strictly speaking, Hawthorne & Manley (2012) don’t endorse the hidden argument account, since they don’t propose that the demonstrative determiner takes an additional argument. However, their account is still closely related to the hidden argument approach. For one thing, they also assimilate demonstratives to a particular sub-type of definites. Moreover, on their account the difference between definites and demonstratives involves the way that the content of demonstratives can be covertly enriched in context.

The first argument, F , is overt. By contrast, the second argument X is *covert*. What this means is that this argument is unpronounced and has no phonological manifestation. Nevertheless, this argument is present at logical form, and is therefore semantically relevant.²⁹

Semantically, the proposal is that demonstratives trigger a presupposition that exactly one object satisfies both the demonstrative determiner’s overt and covert arguments. If defined, the demonstrative denotes this very individual. More explicitly:

Hidden argument account of *that*

$\llbracket that \rrbracket = \lambda f \in D_{\langle e,t \rangle} . \lambda g \in D_{\langle e,t \rangle} : \text{there is exactly one } x \text{ such that } f(x) = g(x) = 1.$ the unique y such that $f(y) = g(y) = 1$

One can find at least two motivations for the hidden argument approach in the literature. First, it has been argued that the hidden argument account—unlike more conventional accounts—allows us to capture both deictic and non-deictic uses of demonstratives (King, 2001; Elbourne, 2008; Nowak, 2014, 2019). Conventional semantics for demonstratives maintain that they are devices of “direct reference”, and that demonstratives refer to specific individuals or objects.³⁰ This theory is well placed to capture deictic uses of demonstratives, e.g. (44):

(44) [Pointing at Pete] That man plays tennis.

On the direct reference approach, the demonstrative in (44) acts like a name and refers to the individual that I’m pointing at, namely Pete. Since (44) does seem to mean the same as ‘Pete plays tennis’, examples such as this do appear to support the direct reference semantics.

However, assuming that ‘that’ is not ambiguous, several theorists have observed that there are other uses of demonstratives that make trouble for this simple picture:

- (45) a. Mary talked to no senator without declaring afterwards that that senator was the one who would sponsor her bill (Elbourne, 2008, , 445).
 b. Every father dreads that moment when his oldest child leaves home (King, 2001, , 10).

²⁹‘ X ’ is intended to be a placeholder for a syntactic structure, e.g. a noun-phrase. I present things this way because I want to remain neutral on how exactly this argument is represented at logical form.

³⁰See, for example (Kaplan, 1989).

- c. Every man who owns a donkey beats that donkey (Elbourne, 2008, , 446).

None of the demonstratives in (45) are being used to refer to a particular object. In (45a) the whole demonstrative is bound by a higher quantifier, and in (45b) the pronoun in the matrix of the demonstrative is being bound by a quantifier outside of it (a so-called “quantifying in” use). Meanwhile, (45c) is repeated from §1, and its demonstrative takes a “donkey anaphoric” reading.³¹ Proponents of the hidden argument approach try to capture both deictic and non-deictic uses of demonstratives by allowing the value of the demonstrative’s covert argument to vary appropriately. For instance, in (44) the value of the covert argument is taken to be the property of being identical to Pete, while in (45a) it is taken to be the property of being identical to x , where x is bound by the higher quantifier.

The second motivation for the hidden argument account comes from contrasts such as the following:

- (46) a. The author of *Waverley* also wrote *Ivanhoe*.
 b. ?? That author of *Waverley* also wrote *Ivanhoe* (Nowak, 2019, , 3).
- (47) [We’re doing a head-count of all of the students on a particular floor of our building, and we walk into a classroom.]
 a. The only student is Mike.
 b. ?? That only student is Mike (Blumberg, 2020, , 3).
- (48) a. The tallest German will win the prize.
 b. ?? That tallest German will win the prize (Hawthorne & Manley, 2012, , 209, fn.19).

Although the (a) sentence in each pair is acceptable, the (b) sentence is not. Nowak (2019) and Blumberg (2020) argue that these contrasts support the hidden argument account. For instance, Blumberg maintains that if the hidden argument approach is correct, then one can derive the following non-redundancy condition from independent principles: roughly put, the demonstrative’s overt argument cannot be known to apply to exactly one thing. This explains why, e.g. (46b) is infelicitous—it is commonly known that exactly one individual wrote *Waverley*. On other approaches, e.g. the direct reference approach, non-redundancy would simply have to be stipulated. We will return to the non-redundancy condition on demonstratives in §6.

³¹See (Nowak, 2014) for a detailed discussion of non-deictic uses of demonstratives and the threat they pose to the direct reference approach.

I now want to draw attention to a further condition on the felicitous use of demonstratives that has been discussed by Hawthorne & Manley (2012). Consider the following contrasts:

- (49) a. ?? I took that car to the garage last night (Hawthorne & Manley, 2012, , 209).
b. I took that car [pointing to my car] to the garage last night.
- (50) a. ?? Mary drove me home yesterday, and she kept talking about how that steering wheel is made from French oak.
b. Mary drove me home yesterday, and she kept talking about how that steering wheel [pointing to the steering wheel in Mary's car] is made from French oak.
- (51) a. ?? Dan invited me for dinner last night, but that refrigerator was broken, so we ended up ordering in.
b. Dan invited me for dinner last night, but that refrigerator [pointing at Dan's refrigerator] was broken, so we ended up ordering in.

As Hawthorne & Manley (2012) point out, even if it is commonly accepted that I own exactly one car, (49a) is infelicitous. By contrast, (49b) is acceptable. The only difference between these cases is that the intended denotation of the demonstrative is being gestured towards, and thus the speaker has made explicit which object he intends to talk about. Similar remarks apply to the other contrasts. Overall, these examples suggest the following *salience* condition on the felicitous use of demonstratives:

Salience Condition for Demonstratives: a demonstrative is felicitous in context only if its second argument is sufficiently salient to the conversational participants (Hawthorne & Manley, 2012).³²

For instance, when (49a) is uttered out of the blue, it is unacceptable because there is no sufficiently salient property that, when intersected with the demonstrative's overt argument, picks out the car that I own. For example, the property of being identical to the car that I own hasn't been made sufficiently salient. By contrast, when I point at my car, such a property does get raised to awareness, which is why (49b) is acceptable.³³

³²Strictly speaking, Hawthorne & Manley don't require that the demonstrative's covert argument needs to be salient, but rather that the material that covertly restricts the denotation of the demonstrative is salient. See fn.28 for further discussion.

³³Hawthorne & Manley aren't explicit about how exactly the property of being identical to the car that I own gets raised to salience in (49b). One fairly intuitive possibility is

It is plausible that the salience condition also explains why (39a)-(41a) are unacceptable (repeated from above):

- (39a) ?? At most of the town’s Halloween parties, many witches left early, but at Tom’s party, that witch left late.
- (40a) ?? In many aquariums, most eels are brightly colored, but in Ben’s fish tank, that eel looks rather dull.
- (41a) ?? At many restaurants, some waiters are unfriendly, but at Cheesy Dreams, that waiter is nice.

One could argue that when uttered out of the blue, these sentences are infelicitous because the covert argument to the demonstrative hasn’t been made sufficiently salient. For example, even if the speaker has a particular witch “in mind”, and even if it is commonly assumed that there was exactly one witch at Tom’s party, if this individual isn’t being attended to by the participants in the conversation, then (39a) is predicted to be infelicitous.

To be clear, the salience condition that Hawthorne & Manley propose leaves many important questions unanswered.³⁴ For instance, in (50a) why shouldn’t mention of Mary driving me home make the property of being the steering wheel in her car sufficiently salient? Similarly, in (51a) why shouldn’t the mention of dinner with Dan make the property of being his refrigerator sufficiently salient? These questions point to a significant issue, and an important lacuna in the account of demonstratives that I’ve presented. One would ideally like an explanation for why some properties but not others are salient in context.³⁵ But giving such an account goes beyond the scope of the present discussion. That said, I’m fairly confident that virtually any theory will have to appeal to something very much like a notion of salience to explain the contrasts in (49)-(51). So, even though the proposal presented above might be considered incomplete in certain respects, I think that this approach is promising, and in broad outline correct.

It is also worth emphasizing that the central motivations for demonstrativism considered in this paper don’t stand or fall with a salience-based account of the contrasts in (39)-(41). Whatever explanation we ultimately

that it gets raised to salience in virtue of my car being raised to awareness through my pointing gesture. No doubt this line of explanation requires further development, and it connects with broader questions concerning salience that I discuss below.

³⁴In fairness to Hawthorne & Manley, they explicitly acknowledge that their account requires further development (209).

³⁵One might be tempted to ground this notion of “property salience” in which particular concrete objects are salient in context. Although this move might be suitable for demonstratives on their deictic uses, it won’t work for non-deictic uses, e.g. those in (45). Once non-deictic uses are considered, and assuming that demonstratives should be given a uniform analysis, the required notion of salience will need to be fairly sophisticated.

want to give give of this data, we have good reason to think that it will also explain what’s going on with the contrasts from §4.1 involving pronouns. That is, the parallels between pronouns and demonstratives that we have considered provide strong evidence that these expressions are very similar semantically, even if further work is required to specify what this semantics is. So, even if salience isn’t the correct account, the major conclusion of the paper will still go through.

I’ll conclude this subsection by considering some apparent counterexamples to the felicity conditions on demonstratives that I’ve discussed here. These come from cases that involve *postnominal modifiers*, such as relative clauses. For example, consider (52):

- (52) a. That man who is tallest among Germans will win the prize (Hawthorne & Manley, 2012, , 209, fn.19).
- b. That guy who wrote *Waverley* also wrote *Ivanhoe* (Nowak, 2019, , 3).
- c. That student who is sitting alone in room 101 is bright.

Let us suppose, as is natural, that the first argument to the demonstrative is comprised of the entire modified noun-phrase, e.g. ‘man who is tallest among Germans’ in (52a). Now, all of these examples are perfectly acceptable out of the blue. Thus, however the notion of *salience* is ultimately spelled out, the covert argument to the demonstrative will not be salient. So, these cases seem to make a problem for the salience condition presented above. Similarly, these examples appear to bring counterexamples to the non-redundancy condition on overt material. For example, ‘man who is tallest among Germans’ is commonly known to denote a singleton, and this material is overt, yet (52a) is felicitous.

In response, Nowak (2019) draws on cross-linguistic data from Mandarin and maintains that in some cases involving postnominal modification the modifier may be attached high in the syntactic tree (adopting the proposal of Bach & Cooper (1978)). When this happens, the modifier takes the place of what is usually the demonstrative’s covert argument, and the head noun takes the place of what is usually the overt argument. This handles the examples in (52). For example, since the head noun ‘man’ does not denote a singleton without help from the relative clause ‘who is tallest among Germans’, (52a) will then pose no problem for the non-redundancy condition. This would also presumably save the salience condition, since however the notion of *salience* is spelled out, presumably an argument will be salient if it is overt.³⁶ Note that if Nowak is correct then the second argument to

³⁶Hawthorne & Manley (2012) provide a similar, though less detailed response to the problems posed by examples involving post-nominal modification.

the demonstrative won't *always* be covert, but will be covert so long as no postnominal modifiers are in play. Since none of our target contrasts involve postnominal modifiers, I will ignore this complication in what follows.

5.3 Pronouns as demonstratives

I propose that pronouns are semantically equivalent to demonstratives, and also take two arguments. Thus, anaphora yield configurations such as (53), illustrating with 'she':

(53) [she F X]

Semantically, pronouns have the same entry as demonstratives:

$$\llbracket she \rrbracket = \lambda f \in D_{\langle e,t \rangle} . \lambda g \in D_{\langle e,t \rangle} : \text{there is exactly one } x \text{ such that } f(x) = g(x) = 1. \text{ the unique } y \text{ such that } f(y) = g(y) = 1$$

On this account, the essential difference between pronouns and demonstratives is that *both* of the pronoun's arguments are covert. The salience condition carries over essentially unchanged:

Salience Condition for Pronouns: a pronoun is felicitous in context only if its second argument is sufficiently salient to the conversational participants.³⁷

As for the pronoun's first argument, I suggest that it is governed by NP-deletion. Thus, (26a) can be represented as in (54), which is equivalent to (39a) (strikethrough text indicates deleted material):

(54) At most of the town's Halloween parties, many witches left early, but at Tom's party, she ~~witch~~ left late.

(39a) At most of the town's Halloween parties, many witches left early, but at Tom's party, that witch left late.

³⁷The similarities between the contrasts exhibited by (26)-(28) on the one hand, and (39)-(41) on the other seem to be related to the "strong contextual felicity" conditions discussed by Tonhauser *et al.* (2013) and King (2018). Tonhauser *et al.* (2013, , 67) explain this notion as follows: 'Strong contextual felicity refers to a particular condition on the felicitous use of [an expression], namely, that it can be used felicitously only if some implication associated with the [expression] is established in the utterance context'. After considering various expressions, King (2018) concludes that pronouns and demonstratives pattern together when it comes to contextual felicity. This claim provides further evidence for demonstrativism, although a detailed discussion of how contextual felicity relates to the salience condition I have posited must be left for future work.

The explanation for why (54) is unacceptable is virtually the same as the explanation for why (39a) is infelicitous: the second argument to the pronoun is not sufficiently salient to the conversational participants. The other contrasts from §4 can be explained in a similar fashion.

By tying the pronoun's first argument to the process of NP-deletion, we retain many of the advantages of Elbourne's theory. For instance, we do not predict that (11b) should be acceptable when uttered out of the blue, for in that case there will be no suitable material available for NP-deletion (this sentence is repeated from above):

(11b) ?? Every married man is sitting next to her.

Also, we do not predict that discourses such as (15) from §3 should be infelicitous, since as we've seen NP-deletion needn't always target an antecedent noun-phrase:

(15) Jason believes that a stockbroker jumped off a building. But he was actually not a stockbroker, but a stuntman.

Indeed, notice that (15) is virtually equivalent to (55):

(55) Jason believes that a stockbroker jumped off a building. But that guy was actually not a stockbroker, but a stuntman.

Overall, by maintaining that pronouns are akin to demonstratives, and take two arguments, we are able to preserve the good-making features of Elbourne's NP-deletion-based theory, while also accounting for the contrasts from §4 that pose a problem for his proposal.

I'll close this section by considering a different set of contrasts that might also be taken to support demonstrativism over descriptivism. Our target contrasts have involved cases where definites are acceptable, but their demonstrative/pronominal counterparts are not. However, there are also cases where demonstratives and pronouns are acceptable, but their definite counterparts are not. The relevant examples involve *contrastive focus*. Elbourne (2013, , 223) discusses contrasts like (56a) and (56c), while King (2001, , 71-72) mentions contrasts like (56b) and (56c) (capitalization indicates focus marking):

(56) a. HE [pointing at Pete] is taller than HIM [pointing at John].
b. THAT man [pointing at Pete] is taller than THAT man [pointing at John].

- c. ?? THE man [pointing at Pete] is taller than THE man [pointing at John].

(56a)-(56b) are acceptable but (56c) is not.³⁸ This suggests that pronouns and demonstratives can bear contrastive focus, but definites cannot. One might then take this to support demonstrativism: (56a) is felicitous precisely because (56b) is, i.e. the ability of pronouns to bear contrastive focus derives from the fact that demonstratives can.

I find the above argument intriguing, but I don't think that it can be quite right. The problem, as Elbourne (2013, , 224) points out, is that the pronoun 'it' doesn't seem to be able to bear focus, contrastive or otherwise:

- (58) a. THAT dog [pointing at Fido] is hairier than THAT dog [pointing at Spot].
 b. ?? IT [pointing at Fido] is hairier than IT [pointing at Spot].
 (59) a. Look at THAT!
 b. ?? Look at IT!

So, the connection between demonstratives and pronouns in terms of focus marking is less clear than the argument proposes. I must leave the contrasts in (56) as suggestive, but at this point inconclusive, evidence for demonstrativism.³⁹

6 Uniqueness

In this section, I want to return to the problem of uniqueness that so-called “donkey anaphora” pose for descriptivism. Descriptivists tend to appeal to situation semantics to handle this problem. Since I also assume that demonstratives carry uniqueness requirements, a similar concern regarding uniqueness arises for my demonstrativist approach. I show that the demonstrativist can also appeal to situation semantics to handle this worry (§6.1). However, I then argue that this response is in tension with the non-redundancy condition on demonstratives briefly discussed in §5.2 (§6.2). I'll finish by outlining two possible ways of resolving this tension.

³⁸Note that shifting emphasis to the head noun still results in infelicity:

- (57) ?? The MAN [pointing at Pete] is taller than the MAN [pointing at John].

³⁹Also see (Ahn, 2019) for discussion of some similar contrasts.

6.1 Situation semantics

Recall that for descriptivists, (3a) is equivalent to (60):

- (3a) Every farmer who owns a donkey beats it.
- (60) Every farmer who owns a donkey beats the donkey.

As mentioned in §2.1, this treatment of (3a) raises the following issue. Suppose that some farmers own more than one donkey, but all farmers beat all of their donkeys. Intuitively, (3a) is true in this scenario. However, on standard analyses of definite descriptions, it seems that (60) will be true only if there exists exactly one donkey in the universe. For instance, on the Fregean analysis, it appears that (60) will suffer from presupposition failure, since ‘the donkey’ will have no semantic value. It is no help to maintain that the pronoun should be interpreted as ‘the donkey x owns’, where x is bound by the higher quantifier, since as we just observed, (3a) can be true even when some farmers own more than one donkey. In short, the uniqueness conditions imposed by standard analyses of definite descriptions do not seem to sit well with the ways in which pronouns are put to use. Now, a similar problem arises for the demonstrativist account that I developed in §5. On this approach, (3a) is equivalent to (5a):

- (5a) Every farmer who owns a donkey beats that donkey.

Although the truth of (5a) doesn’t require that there exists exactly one donkey in the universe, it still requires that exactly one object satisfies both the overt and covert argument to the pronoun. But intuitively, (3a) can be used to say something “about” *many* donkeys owned by the same farmer, no particular one. So, like descriptivist accounts, the uniqueness conditions imposed by my favored analysis of demonstratives do not seem to sit well with the ways in which pronouns are put to use.

Descriptivists tend to respond to the problem of uniqueness by appealing to *situation semantics* (Heim, 1990; Elbourne, 2005, 2008, 2010, 2016). It will be helpful to have such a semantics on the table, so I will present an (extremely) simplified account in what follows.⁴⁰

In this framework, the basic index of semantic evaluation is a *situation*, which we can understand as a spatio-temporally bound “part” of a possible world. The set of situations is ordered by a partial ordering (\leq) whose maximal elements form the set of possible worlds. Propositions are taken to be sets of situations. Given a proposition p , the set of *minimal situations*

⁴⁰The account below is a simplified version of the semantics presented in (Elbourne, 2005).

verifying p are the smallest situations (relative to \leq) in which p is true. Intuitively, a minimal situation in which p is true contains the smallest number of individuals, properties and relations that will make p true. For example, a minimal situation in which Pedro owns a donkey contains just two individuals instantiating the owning relationship, where the first individual is Pedro and the second individual is some donkey.

Examples such as (60) are handled by allowing natural language quantifiers to not just quantify over individuals, but minimal situations as well. In short, (60) is true just in case every minimal situation satisfying the restrictor (i.e. every minimal situation in which a farmer owns a donkey), can be extended to a minimal situation that satisfies the scope. Since there is only one donkey in each minimal situation that verifies the restrictor, the uniqueness presupposition triggered by ‘the donkey’ in the scope is satisfied. To be more precise, the entry for ‘every’ is given below, while a simplified LF for (60) is given in (61):

Situation semantics entry for *every*

$\llbracket \textit{every} \rrbracket = \lambda f \in D_{\langle e, \langle s, t \rangle \rangle}. \lambda g \in D_{\langle e, \langle s, t \rangle \rangle}. \lambda s. \text{for every individual } x: \text{for every situation } s' \text{ such that } s' \text{ is a minimal situation such that } s' \leq s \text{ and } f(x)(s') = 1, \text{ there is a situation } s'' \text{ such that } s'' \leq s \text{ and } s'' \text{ is a minimal situation such that } s' \leq s'' \text{ and } g(x)(s'') = 1$

(61) [every [farmer who owns a donkey] [beats the donkey]]

To reiterate, the crucial idea is that when (61) is evaluated at the actual world, the presupposition triggered by the definite is not checked relative to the (large situation which is the) actual world, but rather relative to each minimal situation smaller than the actual world containing a farmer and exactly one donkey.⁴¹

Now, the problem of uniqueness as it arises for demonstrativists can be resolved in a similar way. Let us suppose that the covert argument to the demonstrative in (5a) is simply ‘donkey’.⁴² Then the LF for (5a) looks as follows:

⁴¹Mandelkern & Rothschild (2019) argue that descriptivist theories which appeal to situation semantics make incorrect predictions about the presupposition projection profiles of definites/pronouns that are anaphoric on indefinites (so-called “discourse definites” (Lewis, 2021b)). I don’t have the space to engage with Mandelkern & Rothschild’s arguments in detail here. But as Mandelkern & Rothschild point out, their examples pose a problem for variabilist theories as well. Moreover, Lewis (2021b) defends a broadly descriptivist account designed to handle discourse definites. Whether a version of demonstrativism can be successfully developed within Lewis’s framework is a topic worth exploring further.

⁴²Elbourne (2008) also effectively makes this assumption for donkey demonstratives such as (5a). However, he doesn’t discuss the problems that this raises for the non-redundancy condition, as I do below.

(62) [every [farmer who owns a donkey] [beats that donkey ~~donkey~~]]

Relative to a situation s , the presupposition triggered by the demonstrative in (62) is that there is a unique individual in s that is a donkey. Given that ‘every’ quantifies over minimal situations containing exactly one donkey, this presupposition will be satisfied.

6.2 Non-redundancy

Although appealing to situation semantics solves the problem of uniqueness as it arises for the demonstrativist, this solution is in tension with the non-redundancy condition on demonstratives briefly mentioned in §5.2.⁴³ Ignoring differences in formulation that are irrelevant for our purposes, both Blumberg (2020) and Nowak (2019) argue for the following condition on the use of demonstratives:

Non-redundancy Condition: a demonstrative is felicitous only if its overt argument is not known to denote a singleton, i.e. its covert argument cannot be idle, or redundant.

The problem is that relative to a minimal situation s containing exactly one donkey, ‘donkey’ will denote a singleton. So, relative to such a minimal situation s , the overt argument in ‘that donkey’ will denote a singleton, i.e. the covert argument will be redundant, no matter what it is. Thus, assuming a situation semantics like the one sketched above, the Non-redundancy Condition predicts that (5a) should be unacceptable, contrary to fact.

I see two possible lines of response to this tension. First, it could be maintained that the overt and covert arguments to the demonstrative should be evaluated relative to different situations, with the overt argument being evaluated relative to a “non-minimal” situation containing many donkeys. There are several ways of implementing this idea, but we needn’t get detained by technical details.⁴⁴ Let us just use [Y s] to signal that the constituent Y should be evaluated relative to situation s . Then, where s^* denotes a situation containing many donkeys, e.g. the actual world, the proposal is that (5a) should be represented as follows:

(63) [every [farmer who owns a donkey] [beats that [donkey s^*] ~~donkey~~]]

⁴³For the purposes of the present discussion, I assume that the covert argument in (5a) is sufficiently salient, and thus satisfies the salience condition discussed in §5.2. However, as noted there, this condition requires further refinement.

⁴⁴See, e.g. (Percus, 2000), (Keshet, 2008), and (Schwarz, 2012).

The covert argument to the demonstrative is still evaluated relative to minimal situations containing exactly one donkey. Relative to such a minimal situation s , the demonstrative in (63) denotes the unique individual that is both a donkey in the actual world (the denotation of s^*) and a donkey in s . Since each such s is a part of the actual world, the denotation of the demonstrative in (63) is equivalent to the denotation of the demonstrative in (62). Moreover, the covert argument to the demonstrative is *not* redundant in (63), since the denotation of ‘donkey’ at the actual world is a set containing many donkeys.

Although this response saves the Non-redundancy Condition, it falls foul of a constraint on predicate interpretation discussed by Keshet (2008, 2010) (building on work by Musan (1995)). Keshet argues that when predicates are interpreted intersectively, they cannot be evaluated at different situations from one another:

Intersective Predicate Generalization

Two predicates interpreted intersectively may not be evaluated at different situations from one another.

Keshet (2010) motivates this constraint through examples such as the following:

- (64) a. # Mary thinks the married bachelor is confused.
- b. # Mary thinks the professor in college is too young to teach.
- c. # Mary thinks there’s someone in this room outside.
- d. # Mary thinks there are three professors (still) in college.

Suppose that Mary believes of an actual married individual that they are unmarried and confused. Then if ‘married’ and ‘bachelor’ could be interpreted relative to distinct situations, there would be a good reading of (64a), namely where ‘married’ is evaluated relative to the actual world, but ‘bachelor’ is evaluated relative to Mary’s belief worlds. That no such reading exists supports the Intersective Predicate Generalization. Similar points apply to the other cases in (64).

The response that we are considering works exactly by interpreting the overt and covert arguments to the demonstrative relative to distinct situations. Moreover, these predicates are interpreted intersectively. So, the response contravenes the Intersective Predicate Generalization. Could one restore parity by providing a different value for the covert argument to the demonstrative? That is, can we find a value for X in (65) that yields the right result even when it is interpreted relative to s^* :

(65) [every [farmer who owns a donkey] [beats that [donkey s^*] [X s^*]]]

I don't see how to achieve this without allowing the indefinite 'a donkey' in the restrictor to bind a variable in X . But this would involve adopting what is the central feature of variabilist approaches to problematic anaphora (since the indefinite doesn't take syntactic scope over X). I won't try to develop this sort of hybrid approach any further here. I'll just note that it appears to be fairly theoretically unattractive.⁴⁵

However, the Intersective Predicate Generalization is actually stronger than is needed to rule out the examples in (64). To predict the infelicity of these sentences, we only require that predicates interpreted intersectively may not be evaluated at *non-overlapping* situations:

Intersective Predicate Generalization (v.2)

Two predicates interpreted intersectively may not be evaluated at non-overlapping situations, i.e. if P is interpreted relative to s_1 , and Q is evaluated relative to s_2 , then there must exist a situation s_3 such that $s_3 \leq s_1$ and $s_3 \leq s_2$.

This revised condition handles Keshet's data. Importantly, it also allows for LFs like (63), since every minimal situation that is a part of the actual world overlaps with the actual world. So, maintaining that the overt and covert arguments to the demonstrative are interpreted relative to distinct situations seems to be a live option.

A different way of trying to resolve the tension between quantification over minimal situations and Non-redundancy is to say that the latter condition can be lifted in some cases, e.g. (5a). This can be motivated by considering how Blumberg (2020) derives Non-redundancy.⁴⁶ Essentially, the idea is that the non-redundancy restriction on the covert argument to demonstratives is derivable from the non-redundancy restriction on pronominal material in definite descriptions. To illustrate the latter, consider the following contrasts:⁴⁷

- (66) a. The fastest horse won the race.
b. ?? The tall fastest horse won the race.

⁴⁵Theorists have debated to what extent the appeal to minimal situations already brings descriptivist accounts closer to variabilist theories. I won't be able to broach this topic here but see (Dekker, 1994) for discussion.

⁴⁶Nowak (2019) derives Non-redundancy semantically, through a presupposition triggered by the demonstrative. However, see (Blumberg, 2020) for an argument against Nowak's proposal.

⁴⁷Similar contrasts are discussed by Schlenker (2005) and more recently Marty (2017).

- (67) a. John's father has arrived.
 b. ?? John's blond father has arrived.
- (68) a. The French president is in the next room.
 b. ?? The educated French president is in the next room.

The (a) sentences are acceptable, but the (b) sentences are not. Intuitively, this is because the head noun in each case is already known to denote a singleton, making the prenominal modifier redundant. For example, it is common knowledge that there is exactly one individual in the extension of 'fastest horse', so 'tall' in (66b) is redundant.

If this is correct, then we should expect exceptions to Non-redundancy, namely whenever definites with redundant prenominal modifiers are felicitous. The question, then, is whether prenominal redundancy is also tolerated in donkey definites. There seems to be some evidence that it is:

- (69) a. Every farmer who owns a vicious donkey beats the vicious donkey.
 b. Every boy who danced with a tall redhead kissed the tall redhead.
 c. Every dog that was given a juicy bone buried the juicy bone.

In each case, the prenominal modifier is redundant, yet each example is perfectly felicitous. So, if Blumberg's arguments are sound, this observation could provide the demonstrativist with a means of resolving the tension between adopting situation semantics and the Non-redundancy Condition. Of course, this is not yet a complete response, since it still needs to be explained why the non-redundancy condition on prenominal material in (69) can be lifted. However, presumably *everyone* needs an explanation of this, not just demonstrativists. So, even though it requires further development, this line of reply seems promising.

7 Conclusion

I have suggested that we can make progress on the semantics of anaphora by essentially treating pronouns as disguised demonstratives, and I have shown that the resulting account fares better than those theories that assimilate pronouns to definite descriptions.

I believe that the approach to anaphora presented in this paper is on the right track. However, there is still much work to be done on this topic. Hopefully the data that we have discussed here will be helpful for future

research, and the positive proposal presented above will provide a basis for further inquiry.⁴⁸

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⁴⁸Although my arguments haven’t touched on variabilism directly, I think variabilists would be in error if they took the foregoing to simply chart an internecine squabble between theorists who posit existence and uniqueness conditions for anaphora. This is because no matter what approach one takes, the similarities between pronouns on the one hand, and demonstratives on the other, need to be accounted for. This project should be of interest even to those who don’t think that pronouns are disguised definites or demonstratives.

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