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*Are Complex ‘That’ Phrases Devices of Direct Reference?**

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Since the seminal work of David Kaplan [1977], the orthodox view of complex ‘that’ phrases (e.g. ‘that man drinking a martini’—henceforth I shall refer to these as ‘*that*’ phrases) has been that they are devices of direct reference.¹ According to this view, the propositional contribution of a ‘that’ phrase as it occurs in a context is an individual. This individual is picked out by the *character* of the ‘that’ phrase in question, where character is (or at least is represented by) a function from context to content or propositional contribution. The character of the ‘that’ phrase in turn is determined by the demonstration or accompanying intention associated with the ‘that’ phrase, together with the descriptive material combined with ‘that’ to form the ‘that’ phrase.

Though there may be some disagreements concerning the details of the proper directly referential story and though there have been some recent challenges to this orthodoxy, I think it is fair to say that most philosophers with any view on the matter subscribe to the orthodoxy.²

Despite this consensus, there is a variety of data that suggests that ‘that’ phrases are not directly referential, but are in fact quantifier phrases. In the present work, I intend to discuss this data and, to a first approximation, formulate a quantificational semantics for ‘that’ phrases.

Those who espouse a directly referential semantics for ‘that’ phrases tend to focus on certain very particular uses of such phrases. They tend to consider only those uses in which a ‘that’ phrase is employed, along with a demonstration, to “talk about” something or someone in the (physical) context of utterance.³ Though the direct reference account is plausible as applied to such uses, there are other uses of ‘that’ phrases for which the account seems problematic.

To begin with, there are uses of ‘that’ phrases in which they not accompanied by any demonstration, need not be used to talk about something present in the

physical context of utterance and in which the speaker has no particular individual in mind as “the thing she intends to talk about by means of the ‘that’ phrase”. Suppose, for example, that Greg has just gotten back a math test on which he scored very poorly. Further, suppose that Greg knows on completely general grounds that exactly one male received a score of one hundred on the exam, (e.g. suppose that Greg’s evil but scrupulously honest teaching assistant told Greg this as he tossed Greg his failing effort). Reflecting on the difficulty of the exam, Greg says:

- (1) That guy who scored one hundred on the exam is a genius.

Let us call uses of this sort *no demonstration no speaker reference* uses, or *NDNS* uses for short. I take it that it is clear that the three conditions mentioned above are satisfied in the case as I have described it. Greg employs no demonstration, need not be talking about something present in the physical context of utterance (who knows where “the genius” is?), and has no one in mind as the individual he wants to talk about by means of the ‘that’ phrase.

Of course, nothing said to this point precludes holding that NDNS uses of ‘that’ phrases are directly referential. One could hold that the phrase in (1) contributes the individual satisfying the descriptive material attaching to ‘that’ to the proposition expressed by (1).⁴ However, a further phenomenon involving NDNS uses is much harder for direct reference theorists to accommodate. Suppose that a classmate of Greg’s hears Greg’s teaching assistant tell Greg that exactly one male received one hundred on the exam, overhears Greg’s (sincere) utterance of (1) and on that basis says to another of Greg’s classmates:

- (2) Greg believes that that guy who scored one hundred on the exam is a genius.

where the classmate’s use of the ‘that’ phrase is itself a NDNS use.⁵ The belief ascription seems clearly true in such a case. But how can the direct reference theorist explain this? According to the direct reference theorist, the embedded sentence in (2) expresses a singular proposition that has as a constituent the person the ‘that’ phrase in it refers to. So on this view, (2) asserts that Greg stands in the belief relation to this singular proposition. But it seems clear that Greg does not stand in the belief relation to the singular proposition in question. Greg, after all, has no idea who scored one hundred percent on the examination!⁶ Thus it is hard to see how the direct reference theorist can explain our intuition that (2) is true in the situation described.

But if the direct reference theorist cannot provide a satisfactory account of the use of the ‘that’ phrase in (2), there are grounds for thinking that she cannot provide an account of the ‘that’ phrase in (1) either. For the uses of ‘that’ phrases in both (1) and (2) are NDNS uses. It seems to me that we should expect a uniform semantic account of NDNS uses. Thus the failure of the direct reference account

in the case of (2) militates in favor of rejecting such an account for the 'that' phrase in (1) as well. So in NDNS uses of 'that' phrases we have data that is problematic for the direct reference theorist.

A second sort of use of 'that' phrases that doesn't seem amenable to a direct reference treatment is illustrated by the following examples:

- (3) Few Nobel prize winners ever forget that moment when they receive their prize.
- (4) Every university professor cherishes that first publication of his/hers.

In (3) and (4) the 'that' phrases contain pronouns that function as variables bound by quantifiers in whose scope the 'that' phrases occur.⁷ Let us call such uses *quantification in* uses, or *QI* uses for short. Clearly, QI uses of 'that' phrases such as those in (3) and (4) don't refer, let alone directly refer, to particular individuals.

There is a final use of 'that' phrases, related to QI uses, that poses problems for the direct reference theorist. Consider the following sentences:

- (5) That police officer who made the most arrests in each precinct was given an award.
- (6) That golfer who is ahead after each hole will be given a prize.

(5) and (6) are ambiguous. (5)'s ambiguity can be brought out by different continuations. First, imagine it followed by: 'His name is Jason Paredes and he is a fine officer.' On this reading, the 'that' phrase is being used to talk about a particular individual, and so the direct reference theorist can account for the reading. But now imagine the following continuation: 'In all ten police officers received awards.' Let us call this reading of (5) the *narrow scope (NS) reading*. The existence of NS readings of (5) and (6) seems hard to reconcile with the claim that 'that' phrases are directly referential. For on these readings, the 'that' phrases are not referring to any particular individuals. Intuitively, in (5) the 'that' phrase is used to make a claim about the different officers who made the most arrests in different precincts. So again here, the direct reference theorist is in trouble.

In summary, we have found three sorts of cases in which 'that' phrases do not seem to be functioning as directly referential terms. It is worth noting that all three cases suggest some sort of quantificational treatment. Without attempting to be specific about the exact nature of the quantification that might be involved and so thinking that the 'that' phrases in such cases may be functioning something like the way in which definite descriptions, understood as quantifier phrases, function, we can get some handle on the NDNS and QI uses, as well as the NS readings of (5) and (6). In the case of NDNS uses, if the 'that' phrase contributes to the proposition expressed some complex descriptive condition that must be (uniquely) satisfied for the proposition to be true, we can see that a speaker could express a proposition using a sentence containing such a phrase when no demonstration is involved and the speaker had no one in mind (as in (1) in the situa-

tion described). More importantly, one can see how a belief ascription like (2) could be true in the situation described. For the ascription would assert that Greg believes a proposition containing a descriptive condition instead of an individual, as the direct reference theorist would have it. As for the QI uses in (3) and (4), we would have one quantifier phrase binding variables in another, as happens in many other cases, e.g.

- (7) Every man loves some woman he kissed.
- (8) Every woman loves the man she first kissed.

And finally, if ‘that’ phrases are quantifiers, we would expect scope interactions between ‘that’ phrases and other quantifiers. Thus the two readings of (5) and (6) are a result of a scope ambiguity, and we explain the NS readings as resulting from the ‘that’ phrases taking narrow scope relative to the quantifier phrases occurring in their relative clauses. Thus our QI uses, NDNS uses, and the NS readings of (5) and (6) suggest *both* that a direct reference account is incorrect *and* that a quantificational account is to be sought.

There are two additional reasons for thinking that ‘that’ phrases are quantificational. First, consider Bach-Peters sentences such as the following:

- (9) Every friend of yours who studied for it passed some math exam she was dreading.

where the pronoun in each noun phrase (‘it’ in ‘Every friend of yours who studied for it’ and ‘she’ in ‘some math exam she was dreading’) is interpreted as anaphoric on the other noun phrase. The most plausible explanations of the acceptability and semantics of such sentences assume that the phrases containing the anaphoric pronouns are both quantifier phrases. Note that sentences like (9), with pronouns understood anaphorically, can be formed using virtually any quantifier phrases:

- (10a) Few friends of yours who studied for them passed several exams they were dreading.
- (10b) Most friends of yours who studied for them passed many exams they were dreading.
- (10c) No friends of yours who studied for them passed at least two exams they were dreading.

Acceptable sentences exactly like (9) and (10a)–(10c) can be formed using ‘that’ phrases:

- (11) That friend of yours who studied for it passed that math exam she was dreading.

As with (9) and (10a)-(10c), this sentence is acceptable with the pronouns interpreted anaphorically. If we suppose that the 'that' phrases are quantifier phrases, the explanation of the acceptability and semantics of (9) and (10a)-(10c) can be carried straight over to (11). That the data comprising (9), (10a)-(10c) and (11) is to be subsumed under a single explanation is made even more plausible by the fact that we can get sentences of this sort in which 'that' phrases combine with other quantifier phrases:

- (11a) Every friend of yours who studied for it passed that exam she was dreading.

To summarize, explanations of the acceptability and semantics of (9) and (10a)-(10c), where the pronouns are understood as anaphoric, are necessary and available. Such explanations assume that the noun phrases in those sentences are quantifiers. On the hypothesis that 'that' phrases are quantifier phrases, (11) and (11a) are automatically subsumed under these very explanations.

By contrast, (11) and (11a) are quite puzzling on the hypothesis that 'that' phrases are devices of direct reference. Taking (11) first, if we assume that the 'that' phrases are directly referential, the pronouns anaphoric on them apparently must be taken to refer to the same thing as their antecedents. Thus, the anaphoric pronouns are referring expressions that inherit their referents from their antecedents. But this leads directly to problems. For on a direct reference view, the predicative material that combines with 'that' to form a 'that' phrase partly determines the character, and hence the referent in the context of utterance, of the 'that' phrase.⁸ But then, the character of the 'that' phrase will be partly determined by the referents of any referring expressions occurring in the predicative material combined with the 'that' phrase. Thus, for example, the character, and hence the referent in a context, of 'that guy standing next to Mark' will be partly determined by the referent of 'Mark'. But now consider 'That friend of your who studied for it' in (11). Its character, and hence referent in a context, depends in part on the referent of 'it'. And the referent of 'it' is determined by its antecedent 'that math exam she was dreading'. Thus the determination of a character, and hence a referent in a context, for 'That friend of yours who studied for it' requires having secured a referent for 'it', which in turn requires having secured a character, and hence referent in a context, for its antecedent 'that math exam she was dreading'. But the character of 'that math exam she was dreading' is partly determined by the referent of 'she'. And the referent of 'she' is inherited from 'That friend of your who studied for it'. Thus 'That friend of yours who studied for it' must be assigned a character, and hence a referent in a context, in order that 'she' be assigned a referent. But, as we have seen, this cannot be done until a referent is secured for 'it'! The upshot is that it is hard to see how the character of either 'that' phrase in (11) can be determined. The determination of the character of a given 'that' phrase in (11) requires securing a referent for the pronoun in it. This in turn requires securing a referent and hence a character for the other 'that'

phrase. But this requires securing a referent for the pronoun in it, which presupposes a referent and hence a character for the other ‘that’ phrase! The bottom line is that determining the character of either ‘that’ phrase presupposes having determined the character of the other. Thus neither can be assigned a character, nor, therefore, a referent. So it is hard to see how a direct reference theory can explain the acceptability, and, in the appropriate circumstances, the truth, of (11).

(11a) only exacerbates the direct reference theorist’s problem. For (11a) has a reading on which it asserts that every friend passed that exam she was dreading, possibly different exams for different friends, (compare: ‘every employee who worked for it received that promotion she had hoped for.’). But since on this reading the ‘that’ phrase is used to talk about the various exams passed by each friend, it can hardly be a referring term. Thus, even if the direct reference theorist were to figure out some way to handle (11) on the assumption that the ‘that’ phrases in it directly refer, it seems very unlikely that the account would handle (11a). So it appears unlikely that the direct reference theorist can give a unified account of (11) and (11a).

In summary, each of (11) and (11a) taken separately is quite problematic for the direct reference theorist. And it appears that in any case she cannot give a unified account of them. By contrast, the view that ‘that’ phrases are quantifiers can appeal directly to already existing explanations for (9) and (10a)–(10c) in explaining both (11) and (11a). Thus, not only does such a view give a unified account of (11) and (11a), but it places them among the broader array of data represented by (9) and (10a)–(10c). Surely, this is the much more theoretically satisfying account of (11) and (11a).

The second additional reason for thinking ‘that’ phrases are quantificational is syntactical. On one widely held view of syntax, there is a level of syntactic representation whose representations are phrase structure representations (trees or bracketings labeled with linguistic categories) derived from surface structure (or S structure) by means of transformations, and whose representations are interpreted by the semantic component.⁹ This level of syntactic representation is called *LF*. According to such views (or at least prominent versions of such views), one of the primary differences between LF representations and surface structure (or S-structure) representations is that in the mapping to LF quantifier phrases get “moved” and end up binding variables (called *traces*) at the level of LF. To illustrate, consider the following S-structure:

(12) [_S[_{NP}Every water skier] [_{VP}is happy]]

in the mapping of this S-structure representation to LF, the quantifier phrase gets adjoined to the S node leaving behind a trace (*e*₁) that functions as a bound variable:

(13) [_S[_{NP}Every water skier]₁ [_S*e*₁ [_{VP}is happy]]]

For a sentence containing two or more quantifier phrases, this movement results in explicit representation of relative quantifier scope at the level of LF. Thus an S-structure such as:

- (14) [_s[_{np}Every philosopher] [_{vp}hates [_{np}some new age flake]]]

has two LF representations, resulting from the fact that the rules mapping S-structure to LF may apply in two different ways:

- (15) [_s[_{np}every philosopher]₁ [_s[_{np}some new age flake]₂ [_se₁ hates e₂]]]

- (16) [_s[_{np}some new age flake]₂ [_s[_{np}every philosopher]₁ [_se₁ hates e₂]]]

The quantifier scope ambiguity of (14) is thus explained by the fact that (15) and (16) are interpreted differently by the semantic component.

For our purposes, the important point in all of this is that on such approaches to syntax, quantifier phrases and singular referring terms, such as names, are treated differently in the mapping from S-structure to LF. Quantifiers undergo “movement”, referring expressions do not. This being so, whether an expression undergoes movement in the mapping to LF indicates whether it is a quantifier or not.¹⁰

There are certain constructions that can be used to detect this sort of movement. It appears to be a condition on VP deletion that neither the missing verb nor its antecedent c-commands the other.¹¹ Yet a variety of examples appear to violate this condition. In examples like

- (17) Tiger birdied every hole that Michael did.

‘birdied’ c-commands ‘did’.¹² However, though this is so at S-structure, if it is assumed that quantifier phrases are moved, resulting in their being adjoined to the S node at LF (leaving behind traces), ‘birdied’ will not c-command ‘did’ at LF as a result of the movement of ‘every hole that Michael did’. Thus, if we assume that the constraint on VP deletion is a constraint that must be satisfied only at the level of LF and that quantifier phrases are moved in the way suggested in the mapping to LF, examples like (17) don’t constitute counterexamples to what appears to be an otherwise well motivated constraint on VP deletion. If all of this is correct, then the acceptability of

- (18) Tiger birdied that hole that Michael did.

suggests that ‘that’ phrases are moved in the mapping to LF and so are quantifier phrases. Thus, we have some syntactic evidence that ‘that’ phrases are quantifier phrases.¹³

Let us summarize our discussion to this point. First, we noted that certain uses of ‘that’ phrases, specifically QI uses, NDNS uses, and the NS readings of (5) and (6), are hard to account for on the hypothesis that ‘that’ phrases are directly ref-

erential. Second, we noted that an account of such uses according to which the 'that' phrases are quantifier phrases seemed promising. Third, we have lately adduced two additional reasons for holding that 'that' phrases are quantifier phrases. We now turn to the problem of formulating an account of 'that' phrases according to which they are quantifier phrases.

We shall suppose that 'that', like 'every', 'some', 'the' etc., is a determiner that combines with predicative material to form a quantifier phrase. There are a number of ways to think of the propositional contribution of determiners. For the present, I shall take determiners to contribute relations between properties to propositions.¹⁴ So, for example, 'some' contributes the relation (between properties) of *having a common instance* to propositions; 'every' contributes the relation of *every instance of ____ is an instance of ____*; etc. Of course, on the present view the determiner 'that' will contribute a relation between properties to propositions just as the other determiners do.

Direct reference theorists generally hold that demonstrations, or the speakers' intentions accompanying them, are relevant to the semantics of 'that' phrases. The idea is that the demonstrations or intentions help determine the referent of a 'that' phrase in a context.¹⁵ I think that there are a variety of reasons for holding that demonstrations or intentions are relevant to the semantics of 'that' phrases.¹⁶ Of course since we claim that 'that' phrases aren't referring expressions, we cannot hold that they are relevant in the way the direct reference theorist claims they are. Thus an immediate concern is how to combine a quantificational account of 'that' phrases with the view that demonstrations, or the intentions accompanying them, are relevant to the semantics of 'that' phrases.

To begin with, I shall suppose that it is the speaker's intention accompanying a demonstration associated with a use of a 'that' phrase, rather than the demonstration itself, that is relevant to the semantics of the 'that' phrase.¹⁷ The kinds of semantically relevant intentions speakers have in using 'that' phrases seem to be of (at least) two sorts. To anticipate, I shall suppose that in each case, the speaker's intentions determine a property.¹⁸

The first sort of case is the sort that direct reference theorists have primarily concentrated on. In such a case, the speaker is perceiving something in her physical environment and has an intention to talk about it. I shall say in such a case that the speaker has a *perceptual intention*. Now I do not intend to say what it is to have a perceptual intention. However, presumably it is a matter of being in certain psychological and perceptual states, where the thing one intends to talk about bears the appropriate sorts of relations (causal and whatever else) to those states. In such a case, let us say that the thing one intends to talk about is *the object of the perceptual intention in question*. Thus, given a perceptual intention, the object of the intention possesses a certain relational property: the property of bearing certain relations to the relevant perceptual and psychological states of the person with the perceptual intention. Let us call this relational property the property of *being the object of the perceptual intention in question*. Thus the intention, taken in the broad sense as including the relevant perceptual and psychological states of the person

as well as the object of the intention and the relations between the former and the latter in virtue of which the latter is the object of the former, uniquely determines the relational property of being the object of the perceptual intention in question.¹⁹

In the second sort of case, a speaker believes that something uniquely possesses certain properties and intends to say something about the thing with those properties. So for example, Danielle sees a poster that says (correctly) that someone (whose name she couldn't quite make out) will be swimming across Lake Tahoe starting at noon the next day. The following day at 12:15 P.M. Danielle has the intention to say something about the person who is currently swimming across Tahoe. Let us call such an intention a *descriptive intention*. Given a descriptive intention, there is a property or conjunction of properties C such that the speaker intends to say something about whatever possesses C. We shall call this property or conjunction of properties *the property of the descriptive intention in question*. Thus here again, the intention uniquely determines a property.

Returning to the semantics of 'that' phrases, how should the intentions we discussed and the properties they determine be incorporated into our semantics? As I suggested above, we take 'that' to express a relation between properties. While other determiners express a two-place relation between properties, 'that' expresses a four-place relation, three of whose places are appropriate for properties, (the "non-property" argument place will be discussed shortly). Speakers' intentions are relevant to the semantics of 'that' phrases by determining a property P* which then saturates one of the three property argument places of the four-place relation expressed by 'that'. The result is a three-place relation, two of whose argument places are appropriate for properties. One way to think of this intuitively is that the semantics of 'that' allows speaker's intentions to supplement the predicative material combined with 'that' to yield a quantifier phrase. That is, the predicative material combined with 'that' to form a quantifier phrase *restricts* the quantification: combining 'that' with 'guy wearing blue pants' restricts the quantification to guys wearing blue pants since 'guy wearing blue pants' expresses the property of being a guy wearing blue pants. This restriction can be supplemented by a property determined by the speaker's intentions so that the quantification is restricted to guys wearing blue pants *and possessing the property determined by the speaker's intention*. This point should become clearer when we subsequently apply the theory to some examples.

In the limiting case, speaker's intentions will have no semantic effect. Imagine an instance of our second case above in which Danielle, in using a 'that' phrase, believes correctly on general grounds (e.g. being told by someone else) that there is a unique person swimming across Lake Tahoe at the present time. Danielle has the descriptive intention to talk about the thing satisfying the property of *being a person swimming across Lake Tahoe now*. Danielle says

(19) That person swimming across Lake Tahoe now must be cold.

In such a case, the property determined by Danielle's intention seems to be just the property of being a person swimming across Lake Tahoe at the time of utter-

ance. But the latter is the property expressed by the predicative material occurring in the ‘that’ phrase. In such a case, Danielle’s intention doesn’t significantly supplement the predicative material combined with ‘that’ at all, since her intention and the predicative material determine/express the same property.²⁰ In such a case, let us say that the speaker’s intentions are *redundant*.

Having seen how the properties determined by speakers’ intentions figure in the semantics of ‘that’ phrases, we must now specify the relation expressed by ‘that’. I claim ‘that’ expresses the following four-place relation: *___ and ___’s unique instance in ___ is ___*, where the first, second and final argument places are property argument places. When a speaker uses ‘that’ in a context (which we can think of as at least a three-tuple of an agent, time, and world), two of those argument places are filled by the property O^* determined by the speaker’s intention and the world and time (w, t) of the context yielding the following two-place relation between properties: *___ and O^* ’s unique instance in w, t is ___*. This relation is then a constituent of the proposition expressed by the speaker’s utterance of ‘That A is B’ in the context in question. Thus, assuming ‘A’ and ‘B’ express the properties A^* and B^* respectively, the speaker’s utterance of ‘That A is B’ in this context would express the proposition that A^* stands in the relation in question to B^* . That is, the utterance expresses the proposition that A^* and O^* ’s unique instance in w, t is B^* . Note that ‘that’ will express different relations between properties given speaker intentions that determine different properties or distinct contexts c and c' whose worlds or times are different.

Now that we have stated the present proposal in this rough way, I think that the best way to further articulate the view is to apply it to a series of examples. Each type of example is intended to illuminate features of the view that have not yet been made clear.

Let us begin with examples of the sort direct reference theorists focus on. In so doing, we shall briefly review what the rigidity of ‘that’ phrases comes to and how the direct reference theorist captures their rigidity. We shall then explain how the present view captures it.

Consider the following sentence

- (20) That man with the mohawk and pierced eyebrow is a musician.

uttered in a context c (whose world and time are w, t) by a speaker S who is perceiving Ron and intends to talk about him by means of the ‘that’ phrase, (where Ron is a man with a mohawk and pierced eyebrow). In order to be neutral on the question of whether ‘that’ phrases refer, let us say that the ‘that’ phrase in (20) as uttered in c *determines* Ron. Consider the proposition expressed by (20) in the context as described. Call this proposition M . Most people have the intuition that whether M *would have been true* in some counterfactual circumstance depends only on whether *Ron* is a musician in that circumstance. This intuition suggests that the truth value in a counterfactual circumstance of the proposition expressed in a context by a sentence containing a ‘that’ phrase always depends on the prop-

erties in that circumstance of the individual determined by the 'that' phrase *in the original context*, (and that the individual in question need not satisfy the descriptive material combined with 'that' in forming the 'that' phrase *in the circumstance in question* for the proposition to be true in that circumstance; e.g. M can be true in a circumstance in which Ron has no mohawk or piercings).

Similarly, consider

- (21) It is possible that that man with orange hair should have been a philosopher.

uttered in a context *c* (whose world and time are *w,t*) by a speaker *S* who is perceiving Patrick, a man with orange hair, and intends to talk about him by means of the 'that' phrase in (21). So the 'that' phrase in (21) determines Patrick as used in *c* by *S*. Call the proposition expressed by (21) in *c* *N*. Again, most have the intuition that when evaluating *N* in a counterfactual circumstance *e*, it is whether there is a circumstance *e'* possible relative to *e* in which *Patrick* is a philosopher that determines whether *N* is true or false in *e*. So here again, the truth value in some other circumstance *e* of the proposition expressed in *c* by (21), depends on the properties (in some circumstance possible relative to *e*) of the individual determined by the 'that' phrase *in c*.

To summarize, in cases like (20) and (21), the truth values in a counterfactual circumstance of the propositions expressed by these sentences in the contexts in which they were uttered depend on the properties in the counterfactual circumstance of the individuals determined by the 'that' phrases *in those original contexts*. This is what the rigidity of 'that' phrase comes to, and this is what any theory of them must capture.

The direct reference theorist explains the rigidity of 'that' phrases very elegantly. 'That' phrases contribute only the individuals they determine (by means of their characters) in the contexts in which they are used to the propositions expressed in those contexts by the sentences containing them, (e.g. the proposition expressed by (20) as uttered in *c* has only Ron and the property of being a musician as constituents). The individuals so determined are, in Kaplan's colorful phrase, "loaded into" the proposition. Thus, when the proposition is evaluated in other circumstances, it is always the individual determined by the 'that' phrase in the context of utterance whose properties are relevant to the truth or falsity of the proposition. Further, since the 'that' phrase contributes *only* the individual so determined to the proposition, the truth of the proposition in some other circumstance does not require that the individual possess *in that circumstance* the property expressed by the descriptive material combined with 'that' in forming the 'that' phrase (e.g. M may be true in a circumstance in which Ron has no mohawk or piercings).

The present view has a quite different account of the rigidity of 'that' phrases. Recall that in uttering (20), *S* in *w,t* was perceiving and intending to talk about Ron by means of the 'that' phrase she employed. Thus, *S* had a perceptual intention whose object was Ron. So on the present view, the proposition expressed by (20)

in the context as described is: *the unique instance of being a man with a mohawk and pierced eyebrow and O^* in w, t has the property of being a musician*, where O^* is the property determined by S's intention—in this case the property of being the object of S's current perceptual intention, (of course, Ron uniquely possesses this property in w, t).²¹ Call this proposition *P*. Note that *P*'s truth or falsity in counterfactual circumstances will depend upon whether *Ron*, mohawked and pierced or not, is a musician in those circumstances. For when we evaluate *P* (*the unique instance of being a man with a mohawk and pierced eyebrow and O^* in w, t has the property of being a musician*) in a counterfactual situation *e*, we are directed to find the unique instance in w, t (the context of utterance) of *being a man with a mohawk and pierced eyebrow and O^** , and see whether that thing is a musician in *e*. But regardless of what *e* is like, *Ron* is the unique instance in w, t of *being a man with a mohawk and pierced eyebrow and O^** . And so the truth of *P* in *e* depends on whether *Ron*, the unique instance of being a man with a mohawk and pierced eyebrow and O^* in w, t , is a musician in *e*. Thus we have the result that when evaluating *P* in any circumstance *e*, we must always determine whether the unique instance in w, t of *being a man with a mohawk and pierced eyebrow and O^** , that is, *Ron*, is a musician in *e*. In other words, *P* is true in an arbitrary circumstance *e* iff *Ron* is a musician in *e*. This is because, very roughly, on the present view a 'that' phrases make a contribution to a proposition such that when that proposition is evaluated in an arbitrary circumstance, the propositional contribution of the 'that' phrase instructs us to go back to the original context of utterance and find the individual satisfying certain conditions *in that context*. Thus the same individual is selected regardless of the circumstance in which the proposition is being evaluated. In this way, the present view captures the rigidity of 'that' phrases without holding that they are directly referential.²²

Similarly, consider again

- (21) It is possible that that man with orange hair should have been a philosopher.

uttered in a context whose world and time are w, t by a speaker *S* who has a perceptual intention whose object is Patrick, a man with orange hair. Thus *S*'s intention determines the property of *being the object of S's current perceptual intention*. Call this property P^* . Of course, Patrick uniquely possesses this property in w, t . On the present account, 'that' phrases are quantifiers and so (21) has a scope ambiguity. 'That man with orange hair' may take either wide or narrow scope relative to the modal operator. The two readings of (21) in the context in question may be represented as follows:

- (21a) $[[\text{THAT}_{w, t, P^*} \text{ man with orange hair: } x][\text{POSSIBLY}[x \text{ is a philosopher}]]]$
 (21b) $[\text{POSSIBLY}[[\text{THAT}_{w, t, P^*} \text{ man with orange hair: } x] [x \text{ is a philosopher}]]]$ ²³

Despite the differences in relative scope, when we evaluate the propositions (21a) and (21b) relative to a world w' and time t' , they will both be true or they will both be false. (I assume that Patrick exists in all the worlds we consider.) Roughly, (21a) is true in w',t' iff there is exactly one thing o such that in w,t o is a man with orange hair and has P^* , and for some w'',t' (w'' possible relative to w') o is a philosopher in w'',t' . (21b) is true in w',t' iff for some w'',t' (w'' possible relative to w'), there is exactly one thing o such that o is a man with orange hair and has P^* in w,t , and o is a philosopher in w'',t' . Intuitively, we begin evaluating (21a) in w',t' by first finding the unique thing o satisfying certain conditions in w,t (i.e. Patrick) and then making sure that o is a philosopher in some world w'' possible relative to w' . We begin evaluating (21b) in w',t' by first going to some world w'' possible relative to w' , then finding the unique thing o satisfying certain conditions in w,t (i.e. Patrick) and making sure that o is a philosopher in w'' . So the difference in the relative scopes of the propositional contributions of 'that man with orange hair' and the modal operator makes no truth conditional difference. More importantly for present concerns, evaluating (21a) and (21b) for any world and time w',t' always requires us to determine whether the unique instance *in w,t* of being a man with orange hair and P^* , that is, *Patrick*, is a philosopher in some world possible relative to w',t' . That is, no matter what w',t' is like, it is *Patrick* who is the unique instance *in w,t* of being a man with orange hair and P^* , and so it is *Patrick's* properties in worlds possible relative to w',t' that determine the truth value of (21a) and (21b) in w',t' . So both (21a) and (21b) are true in w',t' iff Patrick is a philosopher in some world w'' possible relative to w' . Thus, we capture the rigidity of the 'that' phrase in (21).

In summary, the present proposal captures the facts regarding rigidity that have been invoked to defend the claim that 'that' phrases are directly referential.

Let us now consider how the present account handles the uses of 'that' phrases that we earlier argued were not happily accommodated by a direct reference account. First, consider NDNS uses. We, in effect, have discussed how the present account handles typical NDNS cases in discussing redundant speaker's intentions. A typical NDNS use involves a speaker who knows (or believes) on general grounds that something uniquely satisfies some (possibly conjunctive) property P^* . The speaker has a descriptive intention to talk about "the thing that is P^* ". So the speaker's intentions determine the property P^* . Further, under such circumstances the speaker will typically employ a 'that' phrase consisting of 'that' combined with predicative material that expresses the property P^* . The example we used earlier involved Greg, who knew that some male scored one hundred percent on an exam, having been told this by a reliable source. Greg intends to talk about "the thing possessing the property of *being a male who scored one hundred percent on the exam*". Thus his intention determines the property of *being a male who scored one hundred percent on the exam*. Greg says:

- (1) That guy who scored one hundred on the exam is a genius.

Since Greg's intention is redundant (his intention determining the same property expressed by the predicative material combined with 'that'), (1) expresses the

proposition that the unique instance in w, t of *being a male who scored one hundred percent on the exam* is an instance of *being a genius*, supposing w, t to be the world and time of the context of Greg's utterance.²⁴ Further, when Greg's classmate overhears Greg's utterance of (1) and, using the 'that' phrase, as did Greg, with the intention to talk about "the thing possessing the property of *being a male who scored one hundred percent on the exam*", says

- (2) Greg believes that that guy who scored one hundred on the exam is a genius.

the classmate asserts that Greg stands in the belief relation to the proposition that the unique instance in w, t of *being a male who scored one hundred percent on the exam* is an instance of *being a genius*.²⁵ And, of course, Greg does stand in the belief relation to that proposition. So the present account can explain why (2) seems true in the situation described.

Notice that in effect I have claimed that in typical NDNS uses, speaker intentions are redundant. The reason for this is that since the speaker does not have a particular individual in mind and so is not making use of a demonstration, in the general case the audience will have no way of knowing the speaker's intentions and the property they determine. Thus the speaker combines 'that' with predicative material that expresses the property that her intentions determine because this is often the only way to provide the audience access to the property determined by her intentions. The result is that her intentions are redundant.

However, there are NDNS uses in which speaker's intentions are not redundant. In order for the audience to know what proposition was expressed in such a case, something must provide the audience access to the intentions of the speaker. Suppose my friends and I are driving around Lake Tahoe and come across a sign that says that exactly one male will attempt to swim across Lake Tahoe ten minutes from the present time. We drive on and end up in a bar on the other side of the lake thirty minutes later. We look out the window and notice that it has begun to snow. Intending to talk about the unique instance of *being a male swimming across Lake Tahoe at the present time*, I say 'That guy swimming now must be cold.' In this case my intentions determine the property of *being a male swimming across Lake Tahoe at the present time* and so are not redundant, since the predicative material combined with 'that' in forming the 'that' phrase I employ expresses the property of *being a male swimming at the present time*. In virtue of our shared experiences of seeing the sign saying exactly one person will be swimming across the lake and seeing the snow falling at the lake, my audience is in a position to know that I intend to talk about the unique instance of *being a male swimming across Lake Tahoe at the present time*. In such a case I will have expressed a proposition to the effect that the unique instance in w, t of being a male swimming across Lake Tahoe is cold, and my audience will have taken me to express this proposition. But if I am a speaker who wishes to be understood, my intentions will be non-redundant like this only in cases in which something gives

my audience access to my intentions. For this reason I call such cases non-typical, (which is not to say that they are unusual).²⁶

Turning now to QI uses, again I claim that in typical cases speaker intentions are redundant. Before explaining why, however, we must address a complication that we have thus far suppressed. Thus far I have said that in using 'that' phrases, speaker intentions determine properties which then saturate one of the three property argument places in the four-place relation expressed by the determiner 'that'. Further, I have suggested that the predicative material combined with the determiner 'that' in forming a 'that' phrase contributes a property to the proposition expressed by the sentence containing the 'that' phrase. However, neither of these things is true in the general case. Beginning with the latter point, let us consider the propositions expressed by sentences in which one quantifier phrase binds variables (pronouns) in another quantifier phrase, such as

- (7) Every man loves some woman he kissed.

The reading of (7) on which 'he' is a variable bound by the quantifier 'Every man' results from (7) expressing something like the following proposition:

- (7a) [Every* x [man* x]] [some* y [woman* y & x kissed* y]] [x loves* y]]

where e* is the propositional contribution of the expression e (e.g. kissed*, the kissing relation, is the contribution of 'kissed'; every* is the relation between properties expressed by 'every', etc.). Now what is the propositional contribution of the predicative material 'woman he kissed' which is combined with 'some' to form the quantifier 'some woman he kissed'? It is the *two place relation* [woman*y and x kissed* y].²⁷ Thus in cases in which one quantifier phrase binds variables in another quantifier phrase, the predicative material combining with the determiner to form the latter quantifier phrase contributes a relation to a proposition. On the present account this is exactly what happens in examples like

- (4) Every university professor cherishes that first publication of his/hers.

Again we have one quantifier phrase ('Every university professor') taking wide scope over and binding variables in another ('that first publication of his/hers'). Given our account of 'that', and assuming the speaker's intentions are redundant, in a context with world and time w,t (4) expresses the proposition that for every professor x, x cherishes the unique instance in w,t of being x's first publication. Here the predicative material combining with 'that' to form the quantifier phrase ('first publication of his/hers') contributes a relation (y is x's first publication) to the proposition expressed by the sentence, just as happened in (7) above.

Now in a typical case of a speaker uttering (4), what intention will the speaker have in using the 'that' phrase? Intuitively, the speaker intends to use the phrase

to talk about the first publication of each university professor. That is, the speaker intends to talk about the unique instance of *being x's first publication* for each university professor x . Thus the speaker's intentions determine the relation *being x's first publication*.²⁸ Call this relation Ryx (y is x 's first publication). The speaker's intention determines more than just this relation. The intention must also distinguish between the x and y argument places in R . After all, in using the 'that' phrase the speaker intended to make a claim about the unique instance y of Ryx for each university professor x . Thus the speaker's intention determines the relation Ryx , and, as a result of the speaker intending to talk about the unique y such that Ryx for each professor x , distinguishes between the x and y argument places.

Since the speaker's intention determines the relation Ryx , this relation saturates the argument place in the four-place relation expressed by 'that' that in earlier cases was saturated by a property determined by speaker intentions.²⁹ However, since this relation is also expressed by the predicative material combined with 'that' in forming the quantifier 'that first publication of his/hers', the speaker's intention is redundant in such a case.

As I have suggested, such cases are typical for QI uses. A speaker will typically have a descriptive intention in using the 'that' phrase (e.g. in uttering (4), a speaker will typically have the intention to talk about the unique instance of being x 's first publication, for every university professor x) and since she will have no way of giving her audience access to her intention, she will combine 'that' with predicative material that expresses the same relation determined by her intentions. Thus her intentions will be redundant.

However, there are QI uses in which the speaker's intentions are not redundant. In such uses, as in cases of NDNS uses with non-redundant intentions, if my audience is to know what proposition I have expressed, something must provide them access to my intentions. Imagine the following case. Some friends and I are watching a scene in a movie in which a father is hugging his oldest son prior to the son leaving home for the first time. I say to my friends

(22) Every father with a son dreads that moment.

Presumably, in using the 'that' phrase I intend to talk about the unique instance of being the moment when x 's oldest son leaves home, for every father with a son x . So my intention determines the relation *y is the moment that x's oldest son leaves home*, (as suggested above, my intention does more than determine this relation), which saturates an argument place in the four-place relation expressed by 'that'. Thus, in uttering (22) in a context whose world and time are w, t , I express the proposition that every father with a son x dreads the unique instance in w, t of being a moment when x 's oldest son leaves home. In this case, it is the shared experience of watching the movie that I exploit in making my intention accessible to my audience.³⁰ As in the NDNS cases, speakers who wish to be understood will only have non-redundant intentions in QI uses where something gives their audience access to their intentions.

In the cases discussed so far, the speakers' intentions in QI uses, whether redundant or not, have been descriptive. However, I think there are examples of QI uses in which a speaker has a perceptual intention. Imagine that a number of students are standing in the hallway in front of me and, pointing at a particular student, I say:

(23) Some professor told that student of his to see the Dean.

In such a case, I intend to talk about the student I am currently perceiving and demonstrating. Thus I have a perceptual intention which determines the property of being the object of my current perceptual intention. Thus my utterance of (23) in a context whose world and time are w, t expresses a proposition to the effect that some professor told the unique instance in w, t of being a student of his and being the object of my current perceptual intention to see the Dean.

Let me summarize the lessons to be gleaned from the various examples we have considered. First, we saw how the present view accounts for the facts about rigidity that have been used to motivate a directly referential account ((20), (21)). Next, the application to NDNS uses illustrated cases in which speaker intentions are redundant ((2), (3)) (though there were other NDNS cases in which they weren't). Note that NDNS cases always involve descriptive intentions on the part of the speaker. Finally, QI uses again illustrated cases involving redundant intentions, and also showed that speaker intentions sometimes determine relations rather than properties. Further, we saw that in QI cases, speaker intentions can be descriptive ((4), (22)) or perceptual ((23)). When they are descriptive, they may ((4)) or may not ((22)) be redundant.

There is one final phenomenon I would like to consider, because it might be thought to show that 'that' phrases are directly referential, contrary to what is being claimed here. On the present view of 'that' phrases, they are quantifier phrases. Of course, quantifier phrases can bear various relative scope relations to other expressions that have scope. Thus, for example, quantifiers can take wide or narrow scope relative to other quantifiers, modal operators, "propositional attitude operators" (e.g. 'Greg believes'), etc. . Now, as we saw in considering (21), given certain assumptions and what we claim to be the semantics of 'that', whether a 'that' phrase takes wide or narrow scope relative to a modal operator can make no difference to the truth value of the sentence the 'that' phrase occurs in. For 'that' in a context whose world and time are w, t expresses the relation of *P and R's unique instance in w, t being Q* (where P, R, and Q properties). So whether the 'that' phrase is evaluated before a modal operator (taking wide scope over the operator) or after the modal operator (taking narrow scope relative to the operator) won't make any difference. The 'that' phrase will in either case direct us to find the unique instance in w, t of certain properties, and so in either case the same individual will be selected, and the properties of *that individual* (in other possible worlds) will determine the truth or falsity of the sentence. In such cases, different scopes make no truth conditional difference.

However, this shouldn't be the case with respect to scope relations between 'that' phrases and attitudinal operators. There should be truth conditional differences in such cases if the present view is correct. And this raises the following worry. Consider a belief ascription containing a "classic demonstrative" use of a 'that' phrase in which the phrase is accompanied by a demonstration and the speaker intends to use the phrase to talk about something in her immediate physical environment. That is, the speaker has a perceptual intention. Thus imagine that Gitti says:

- (24) Glenn believes that that man leaning against the wall drinking a martini is a spy.

in a context whose world and time are w, t while pointing to a man leaning against a wall drinking a martini. Clearly, (24) has a reading on which it ascribes to Glenn a belief involving the singular proposition containing the man leaning against the wall. The direct reference theorist claims that this reading results from the 'that' phrase directly referring to the man in question so that the embedded sentence in the belief ascription expresses this singular proposition. And of course, the direct reference theorist claims that (24) has only this one reading. On the present view, the reading just described results from the 'that' phrase taking wide scope over 'Glenn believes'. Henceforth we shall call this *the wide scope reading of (24)*. On this reading, the 'that' phrase quantifies into 'Glenn believes' and so asserts that Glenn has a belief involving the singular proposition containing the man leaning against the wall. So both views can account for the reading in question. However, the present view should allow that (24) has a reading on which the 'that' phrase takes narrow scope relative to 'Glenn believes' and this reading will have different truth conditions from the reading we have described. Henceforth we shall call this *the narrow scope reading of (24)*. It will not ascribe to Glenn a belief involving the singular proposition containing the man leaning against the wall as a constituent. Thus if the direct reference theorist is correct in claiming that (24) only has the reading his theory accounts for, the present view will have been dealt a blow.

Before addressing this point directly, I wish to note that we have already seen cases in which 'that' phrase take narrow scope relative to belief operators. For example, we have seen that

- (2) Greg believes that guy who scored one hundred on the exam is a genius.

has a reading on which the 'that' phrase takes narrow scope relative to 'Greg believes' and so doesn't ascribe to Greg a relation to a singular proposition. Further, there is surely a reading of

- (25) Cini believes that every university professor cherishes that first publication of his/hers.

on which the universal quantifier 'every university professor' takes narrow scope relative to 'Cini believes'. But since the 'that' phrase takes narrow scope relative to 'every university professor', it must take narrow scope relative to the belief operator. Thus even if the direct reference theorist were right in claiming that (24) does not have a reading on which the 'that' phrase takes narrow scope relative to 'Glenn believes', this would provide her with little consolation. For she is in no position to explain these other cases in which 'that' phrases do take narrow scope relative to belief operators.

Returning to (24), how would one go about showing that it has a reading on which it ascribes to Glenn a belief not involving a relation to a singular proposition? One would have to construct a case in which Glenn does not have a belief involving the singular proposition in question but in which (24) seems true anyway. I shall argue that the present account explains why such cases are hard to construct; and I shall construct such a case. First, however, we must consider the nature of the narrow scope reading predicted by the present account. In uttering (24), we are to imagine that Gitti is perceiving a man and intends to use a 'that' phrase to talk about him. So her intention determines the property of *being the object of Gitti's current perceptual intention*. So the current account claims that the embedded sentence in (24) expresses the proposition that the unique instance in w,t of *being a man leaning against the wall drinking a martini* and *being the object of Gitti's current perceptual intention* is a spy. Thus, on the narrow scope reading, (24) ascribes to Glenn a belief to the effect that the unique instance in w,t of *being a man leaning against the wall drinking a martini* and *being the object of Gitti's current perceptual intention* is a spy. Now note that unless Glenn is present as Gitti utters (24) accompanied by a demonstration, it is quite unlikely that he would have this belief. For unless Glenn sees Gitti's demonstration, which is an "externalization" of her current intention, he is extremely unlikely to have any belief to the effect that the object of Gitti's current perceptual intention has some further properties! And of course if Glenn is present to witness Gitti's demonstration and utterance, and if Glenn does believe that the unique instance in w,t of *being a man leaning against the wall drinking a martini* and *being the object of Gitti's current perceptual intention* is a spy (so that (24) is true on the narrow scope reading), it is overwhelmingly likely that Glenn has a belief involving the singular proposition containing the man drinking the martini as a constituent. After all, in such a case Glenn sees the man who is drinking the martini and who is the object of Gitti's current perceptual intention. So he will believe of that man that he is a spy. In such a case, then, the wide scope reading of (24) will be true as well. Thus the present account predicts that in a case in which the narrow scope reading of (24) is true, it will be overwhelmingly likely that the wide scope reading of (24), on which it ascribes to Glenn a belief involving a singular proposition, is true as well. This makes it extremely difficult to detect, and provide evidence for the existence of, the narrow scope reading of (24). And this, I claim, is why many, perhaps most, philosophers take (24) to have only one reading.

Given what has been said to this point, it should be clear that a case in which the narrow scope reading of (24) is true and the wide scope reading is false will be somewhat bizarre. Here is such a case.³¹ Glenn has been monitoring the conversations of various spies and has come to believe that at precisely 1:00 P.M. the next day, a man who is a spy will enter the lobby of the Hotel Dell and lean against a wall drinking a martini. Glenn has instructed Gitti to be at this location at the relevant time. He then tells Gitti that in order for other operatives present to know she is working for Glenn, at the very moment the man leans against the wall with the martini, she must look at him and say something about him. Glenn believes Gitti will do this, knowing her to be a reliable spy. When the time comes, a flustered Gitti points at the man and blurts out:

- (24) Glenn believes that that man leaning against the wall drinking a martini is a spy.

My intuitions are that the ascription is true in such a case. However, Glenn does not bear the belief relation to the singular proposition containing the man leaning against the wall as a constituent. Thus the wide scope reading of (24) (or the purported “directly referential” reading) is false. However, the narrow scope reading seems true. Glenn does seem to believe the proposition that the unique instance in *w,t* of *being a man leaning against the wall drinking a martini-and-being the object of Gitti’s current perceptual intention* is a spy, (where *w,t* are the world and time of Gitti’s context of utterance). Thus the fact that we intuitively judge (24) to be true in such a case provides evidence for the existence of the narrow scope reading predicted by the present theory.

Of course others might not share my intuitions about (24) in the situation described. The case is sufficiently bizarre that intuitions may not be that firm or unanimous. But *any* case in which the narrow scope reading of (24) is true and the wide scope reading is false will have to be quite bizarre. For it must be a case in which Glenn believes that the unique instance in *w,t* of *being a man leaning against the wall drinking a martini-and-being the object of Gitti’s current perceptual intention* is a spy, without believing of the man in question that he is a spy (in the sense of standing in the belief relation to the relevant singular proposition). Thus the skeptic can claim that any evidence we give for the existence of the narrow scope reading will be suspect. But such a consideration cuts both ways. If intuitions are unclear about such cases, then it is unclear that there is *not* a narrow scope reading. But then the claim that such a reading is absent is as uncertain as the claim that it is present. Thus those who claim that intuitions are unclear in such cases cannot appeal to the absence of the narrow scope reading as an argument against the present view.

In conclusion, I have argued that there is evidence that ‘that’ phrases are not directly referential. Further, I claim this evidence suggests a quantificational account of ‘that’ phrases. Finally, I have given an account of the semantics of ‘that’ according to which ‘that’ phrases are quantificational and have shown the ac-

count *both* able to handle data not happily accommodated by an account of 'that' phrases as directly referential *and* able to account for the data thought to show that 'that' phrases are directly referential. Still, I view the present account as a first approximation to the correct account. However, I expect that account to be quantificational.

Appendix

We provide a formal semantics for a simple language containing complex 'that' phrases. Suppose our language contains n -place predicates ('A', 'B', with or without numerical subscripts) for all $n > 0$; individual variables ('x', 'y', 'z' with or without numerical subscripts) and names ('a', 'b', 'c'). The language also contains the determiners 'every', 'some' and 'that', and the modal operator 'P' ('possibly'). The syntax is as follows:

1. If δ is a determiner, α is a variable and Σ is a formula containing free occurrences of α [$\delta\alpha\Sigma$] is a quantifier phrase, (α is called *the variable of the quantifier phrase*).
2. If Π is an n -place predicate and $\alpha_1, \dots, \alpha_n$ are names or variables, [$\Pi\alpha_1, \dots, \alpha_n$] is a formula.
3. If Ω is a quantifier phrase and Σ is a formula, then [$\Omega\Sigma$] is a formula.
4. If Ψ and Φ are formulas, so are $\sim\Phi$ and [$\Phi\&\Psi$].
5. If Ψ is a formula, so is $P[\Psi]$.

For each simple expression e of the language, we say what e *expresses*. With the exception of 'that', an expression contributes what it expresses to propositions expressed by formulas containing it. A simple expression e *expresses* e^* iff:

1. e is a variable and $e=e^*$.
2. e is a name and e^* is the bearer of e .
3. e is an n -place predicate and e^* is the n -place relation associated with e , (we call 1-place relations *properties*).
4. e is the determiner 'every', or 'some' and e^* is the relation between properties EVERY (each instance of ____ is an instance of ____), or SOME (____ and ____ have a common instance), respectively, (actually, we take determiners to express relations between propositional frames—see below)
5. e is the determiner 'that' and e^* is the relation THAT (____ and ____'s unique instance in ____ is ____).
6. e is ' \sim ' or ' $\&$ ' and e^* is the truth function NOT or AND, respectively.
7. e is 'P' and e^* is the property (of propositions) POSSIBLY (of being possible).

Assume we are given a set W of possible worlds; a set I of individuals (for simplicity, common to all the worlds); a set T of times (common to all the worlds) and a set C of contexts such that for each c in C , $c=\langle i, w, t \rangle$, where $i \in I$ (and is the *agent of c*), $w \in W$, and $t \in T$.

In what follows let δ be a determiner other than 'that'; Σ , Ψ , Φ , be formulas; Π be an n -place predicate; $\alpha, \alpha_1, \alpha_2, \dots$ be names or variables; and ξ be a variable. For any simple

expression ε , let ε^* be what ε expresses. Let c be the context $\langle i, w, t \rangle$. We define the *propositional frame expressed by a formula in c*:

1. The propositional frame expressed by $[\Pi\alpha_1, \dots, \alpha_n]$ in c is $[\Pi^* \alpha_1^*, \dots, \alpha_n^*]$
2. The propositional frame expressed by $[[\delta\xi\Sigma]\Psi]$ in c is $[[\delta^*\xi\Sigma']\Psi']$, where Σ', Ψ' are the propositional frames expressed by Σ, Ψ in c respectively.
3. The propositional frame expressed by $[[\text{That}\xi\Sigma]\Psi]$ in c is $[\text{THAT}_{w,t,f(c)}\xi\Sigma']\Psi']$, where f is a function from contexts to propositional frames; and $\text{THAT}_{w,t,f(c)}$ is the result of saturating the second and third argument places in the 4-place relation expressed by 'that' (i.e. THAT : ____ and ____'s unique instance in ____ is ____) with $f(c)$ and w, t respectively (i.e. ____ and $f(c)$'s unique instance in w, t is ____); and with Σ', Ψ' as above.
4. The propositional frames expressed by $\sim\Sigma$ and $[\Sigma\&\Psi]$ in c are $\sim^*\Sigma'$ and $[\Sigma'\&^*\Psi']$, respectively, with Σ', Ψ' as above.
5. The propositional frame expressed by $[P[\Psi]]$ in c is $[P^*[\Psi']]$, Ψ' as above.

I call these propositional frames because they include things like $[\Pi^* x]$, (where Π^* is a property and x is a variable), which contain free variables. Propositions are propositional frames containing no free variables.³² Clause 3 requires a little explanation. f maps contexts to propositional frames. Intuitively, where $c = \langle i, w, t \rangle$, the propositional frame $f(c)$ represents the property or relation determined by the intention of the agent of c (i.e. i) at t in w .³³

Let g, g' be functions that maps variables to individuals ($\in I$) and individuals to themselves; ψ, ψ_1, \dots be individuals or variables; ξ be a variable; R be an n -place relation ($1 \leq n$); and Ξ, Γ be propositional frames. Where Δ is a propositional frame, we define *the proposition expressed by Δ relative to g* , $\text{Pr}(\Delta)_g$, as follows:

1. If $\Delta = [R\psi_1, \dots, \psi_n]$, then $\text{Pr}(\Delta)_g = [R g(\psi_1), \dots, g(\psi_n)]$
2. If $\Delta = [[\text{EVERY}\xi\xi]\Gamma]$, (recall that EVERY is the relation between properties: each instance of ____ is an instance of ____), then $\text{Pr}(\Delta)_g = [[\text{EVERY}\xi\text{Pr}(\Xi)_{g-\xi}]\text{Pr}(\Gamma)_{g-\xi}]$, where $\text{Pr}(\Omega)_{g-\xi}$ for Ω a propositional frame, is the result of replacing $g(\xi)$ by ξ in $\text{Pr}(\Omega)_g$, (similar clauses for SOME).
3. If $\Delta = [[\text{THAT}_{w,t,f(c)}\xi\xi]\Gamma]$, $\text{Pr}(\Delta)_g = [\text{THAT}_{w,t,\text{Pr}(f(c))_{g-\xi}}\xi\text{Pr}(\Xi)_{g-\xi}]\text{Pr}(\Gamma)_{g-\xi}$, $\text{Pr}(\Omega)_{g-\xi}$, for Ω a propositional frame, as in 2.
4. If $\Delta = [[\Xi \text{ AND } \Gamma]]$ (recall that AND is the truth function for conjunction), $\text{Pr}(\Delta)_g = [\text{Pr}(\Xi)_g \text{ AND } \text{Pr}(\Gamma)_g]$, (similar clause for negation).
5. If $\Delta = [\text{POSSIBLY}[\Xi]]$, then $\text{Pr}(\Delta)_g = [\text{POSSIBLY}[\text{Pr}(\Xi)_g]]$.

(Note that if Δ has no free variables (i.e. is a proposition), then $\text{Pr}(\Delta)_g = \Delta$.)

Let o, o^1, o^2, \dots be individuals; R be an n -place relation; Ξ, Γ be propositional frames; X, Y be propositions; and ξ be a variable. If R is an n -place relation, the *intension of R* is a function from world-time pairs to sets of n -tuples; and the *extension of R in w, t* $\text{ext}_{w,t}(R)$, is the result of applying its intension to the world-time w, t . Finally, as suggested above, we will take determiners to express relations between propositional frames with one free variable (instead of properties).

1. A proposition of the form $[R \ o^1, \dots, o^n]$ is true in w, t iff $\langle o^1, \dots, o^n \rangle$ belongs to $\text{ext}_{w,t}(R)$.
2. A proposition of the form $[[\text{EVERY } \xi \ \Xi] \Gamma]$ is true in w, t iff $\{o^1 : \text{for some } g' \text{ such that } g'(\xi) = o^1, \text{Pr}(\Xi)_{g'} \text{ is true in } w, t\}$ is a subset of $\{o : \text{for some } g \text{ such that } g(\xi) = o, \text{Pr}(\Gamma)_g \text{ is true in } w, t\}$ (similar clauses for SOME—this may make it appear as though EVERY is a three place relation between two propositional frames and a world-time pair w, t ; but I take EVERY to be a 2-place relation between propositional frames that obtains at some world-time pairs and not at others)
3. A proposition of the form $[[\text{THAT}_{w',t',f(c)} \ \xi \ \Xi] \Gamma]$ where $c = \langle i, w', t' \rangle$ is true in w, t iff $\{o : \text{for some } g \text{ such that } g(\xi) = o, \text{Pr}(f(c))_g \text{ and } \text{Pr}(\Xi)_g \text{ are true in } w', t'\}$ has one member o^1 and $o^1 \in \{o : \text{for some } g' \text{ such that } g'(\xi) = o, \text{Pr}(\Gamma)_{g'} \text{ is true in } w, t\}$
4. A proposition of the form $[X \text{ AND } Y]$ is true in w, t iff the value of AND when applied to the truth values of X and Y in w, t is true, (similar clause for negation).
5. A proposition of the form $[\text{POSSIBLY}[X]]$ is true in w, t iff for some w' , X is true in w', t .

Notes

*A version of this paper was given at the University of California, Irvine. Terry Parsons and Robert May made helpful comments and suggestions. Kent Bach, David Braun, Ernie Lepore, Kirk Ludwig and Ron Pritchard made very useful comments on an earlier draft of the paper. Conversations with Kent Bach and David Sosa helped me clarify my thoughts on various issues addressed herein. The members of the Bay Area Philosophy of Language Discussion Group read the manuscript and made useful comments. Finally, I am grateful for the helpful comments of Peter Ludlow on the penultimate draft of the paper. Having had all this good help and advice, I alone am responsible for any errors that remain.

¹Of course Kaplan himself was more concerned with the word 'that' occurring by itself as a noun phrase ('That is a planet') than with what I am calling complex 'that' phrases. But Kaplan [1977] suggests that his account is to be extended to complex noun phrases, when, after characterizing the character of a complete demonstrative (a demonstrative completed by a demonstration), he says: 'Obvious adjustments are to be made to take into account any common noun phrase which accompanies or is built-in to the demonstrative.' (p. 527; my emphasis). Further, other philosophers have taken Kaplan's account to apply to what I call complex 'that' phrases.

²Concerning differences of detail, see e.g. Braun [1994], [1996]; for dissent from the orthodoxy, see Lepore and Ludwig [1998], Neale [1993] and Richard [1993]. The views discussed by Lepore and Ludwig, Richard and Neale have some features in common with the view being defended here. However, the present view is importantly different from all of them.

³I use 'talk about' here as a way of avoiding saying that the phrase *directly refers* to the thing talked about, since I don't think it does. Hence on my use to say that a phrase is used to talk about an individual does not commit one to the claim that the individual is contributed to the proposition expressed by the sentence containing the phrase.

⁴Presumably, in such cases the descriptive material combined with 'that' in forming the 'that' phrase would have to determine the phrase's character by itself, since a demonstration and the sort of intention that accompanies a demonstration are lacking.

⁵That is, the classmate does not employ a demonstration, need not be talking about anyone in the physical context of utterance, and has no particular individual in mind.

⁶In a personal communication regarding a different example, David Braun suggested a strategy that would allow the direct reference theorist to say that Greg does stand in the belief relation to the singular proposition that she thinks is expressed by (1) and so hold that the belief ascription in (2) is true, (I take it Braun's suggestion is based on Kaplan's [1977] remarks on p. 560, footnote 76, where the same idea is discussed). Braun notes that Greg does possess a uniquely identifying description

picking someone out in this case. Now according to the direct reference theorist, the ‘that’ phrase in (1) is directly referring. What Greg has done in uttering (1) is to introduce a term that directly refers to “the genius” by using the uniquely identifying description to fix the reference of the directly referential term. Having done this, Greg *does* stand in the belief relation to the singular proposition in question, and so (2), which according to the direct reference theorist asserts that Greg stands in the belief relation to the singular proposition in question, is literally true. The underlying idea here is that whenever one has a uniquely identifying description, one can come to stand in the belief relation to singular propositions containing the individual satisfying the description by introducing a directly referential term whose reference is fixed by the description. I take it that the view is that to stand in the belief relation to a singular proposition in such a case, one must actually introduce a directly referential term whose reference is fixed by the description in question. It isn’t enough merely to possess the uniquely identifying description. Otherwise, there would never be a case in which a belief ascription containing a definite description is true on the narrow scope reading of the description (where it ascribes a general belief to the effect that the F is G) and false on the wide scope reading (where it ascribes a belief in a singular proposition). But then we can slightly alter our example so that the direct reference theorist cannot use this strategy to explain our intuition that (2) is true. Suppose that the situation regarding Greg is exactly as I described it previously except that instead of (1), Greg utters ‘The guy who scored one hundred percent on the exam is a genius’. Further suppose that Greg simply does not introduce a directly referential term (even in mentalese!) whose reference is fixed by his uniquely identifying description. I claim that (2) is still true!

⁷Neale [1993] denies that such constructions are possible, noting the unnaturalness of ‘Every driver knows that mechanic working for him.’, (curiously, Neale also provides a perfectly acceptable instance of such a construction: ‘Every man eagerly looks forward to that day when he retires.’, attributing it to Jamie Tappenden). I agree with Neale that some such examples seem unnatural. However, many examples of this sort seem perfectly fine, as (3), (4) and the example in the present note indicate. What produces the unnaturalness in certain cases is an interesting question.

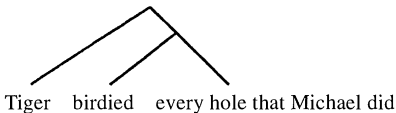
⁸Of course, there are direct reference views that deny any semantic role to the predicative material combined with ‘that’ in forming a ‘that’ phrase. However, such views are very implausible in the present case. For we can imagine that the ‘that’ phrases have NDNS uses in (11) (indeed, this is the natural way to take (11)). Thus they are not accompanied by any demonstration, need not pick out anything in the physical context of utterance, and the speaker need have no particular things in mind as the “things she wants to talk about” (thus she might just know on general grounds that the person being addressed has a unique friend who has been studying for a unique exam she has been dreading). But since there is no demonstration in such a case, what could determine the characters, and hence the referents, of the ‘that’ phrases?

⁹Chomsky [1981], [1982]; May [1985].

¹⁰The following discussion leans heavily on May [1985]. May uses “movement tests” tests to support the claim that definite descriptions are quantificational. See pp. 4–25.

¹¹Roughly α c-commands β iff the first branching node dominating α dominates β and α does not dominate β .

¹²A tree for (17) would look something like this:



(where we haven’t bothered with the structure of ‘every hole that Michael did’, since it is apparent that ‘birdied’ c-commands ‘did’ without going into this).

¹³Compare (18) with:

*(18a) Copp flunked Holmes, who Jubien did.

*(18b) Copp flunked him, who Jubien did.

These violate the condition on VP deletion even at LF, since 'Holmes' and 'him' are not quantifier phrases and so do not undergo movement. May [1985] defends the view that the acceptability of (17) (and (18)—in a personal communication), and the unacceptability of (18a) and (18b), are to be explained in terms of quantificational NP's undergoing movement in the mapping to LF and referring expressions not being subject to such movement. This explanation of the data has been challenged recently by Norbert Hornstein [1995]. Hornstein argues that the acceptability of (17) and (18) and the unacceptability of (18a) and (18b) is not to be explained by appeal to a movement rule that applies to quantificational NP's and not names. If Hornstein is correct, then the acceptability of (18) does not show that the 'that' phrase in it is a quantifier phrase. Similarly, Larson and Ludlow [1993] claim that names optionally undergo movement of the sort I have supposed quantifiers undergo in examples like (17). So again, if they are right, the acceptability of (18) may show that 'that' phrases too undergo such movement, but would not show that they are quantifiers (since non-quantifiers can undergo such movement). I have neither the time nor the space in the present work to defend May's account against the challenges of Hornstein and Larson and Ludlow. Let me, then, simply note that the argument does depend on May's account. I am indebted to Peter Ludlow for bringing these issues to my attention.

¹⁴I do this because I think that taking determiners to express relations between properties allows the most straightforward formulation of the sort of theory of complex 'that' phrases that I favor. In the formal semantics of the Appendix, I actually take determiners to express relations between what I there call *propositional frames*. In exposing the view informally, I think it best to talk in terms of properties. Also, it should be remembered that I view the present attempt as a first approximation to the correct account.

¹⁵The demonstration or intention, together with the descriptive material combined with 'that' to form the 'that' phrase, determine the character (function from context to content) of the 'that' phrase.

¹⁶One of these reasons has to do with the explanation of differences between the behavior of 'that' phrases and definite descriptions. I assume that though speaker's intentions and demonstrations sometimes accompany uses of definite descriptions, they are of no semantic significance when accompanying definite descriptions. (Both Russell's account and current accounts, such as Neale [1990], of the semantics of definite descriptions endorse this claim.) If this is so, then one semantic difference between definite descriptions and 'that' phrases is that demonstrations or speaker's intentions have a semantic role when accompanying the latter but not when accompanying the former. This difference, it seems to me, explains why the phrase 'that F' can be used several times in a situation in which there are many F's to talk about distinct F's, whereas 'the F' cannot be. For example, looking at cars in a lot filled with new cars, one can say 'That car is nicer than that car.' talking about distinct cars by means of the distinct occurrences of 'that car'. However, one could not felicitously use 'the' phrases instead: 'The car is nicer than the car' (with or without accompanying demonstrations) is infelicitous. If demonstrations or speaker intentions are relevant to the semantics of 'that' phrases, different demonstration or intentions associated with the distinct occurrences of 'that F' would allow them to be used to talk about distinct F's, which would explain the felicity of 'That car is nicer than that car'. By contrast, the semantics of 'the' does not allow a role for demonstrations or speaker intentions. Thus, there is nothing that allows the distinct occurrences of 'the F' to be used to talk about different F's. Hence the attempt to use distinct occurrences of 'the F' to talk about distinct F's in an F-filled environment results in infelicity.

¹⁷Kaplan originally took demonstrations to be relevant to determining the referent of 'that' phrases. But he later took the "directing intention" to be relevant and regarded the demonstration '... as a mere *externalization* of this inner intention.' (Kaplan [1989] p. 582). Thus I side with the later Kaplan on this point.

¹⁸Actually, in some cases the speaker intentions determine a relation rather than a property. I ignore this complication for the next several pages in the interest of clear exposition. Terry Parsons pointed out that my exposition of my own theory is inaccurate in this respect.

¹⁹There is another property determined by a perceptual intention. If b is the object of a given perceptual intention, that intention (taken in the broad sense as including the perceptual and psychological states of the speaker as well as b, the object of the intention) determines the property of *being*

identical to b. There is a version (really, several versions—see note 21) of the present view that makes use of this property rather than the one discussed in the body of the paper. This is the sort of thing I have in mind when I (repeatedly!) say that the present account is a first approximation to the correct account.

²⁰The property determined by Danielle's intention in such a case still saturates an argument place in the four-place relation expressed by 'that'. It just does so to no semantic effect, since that very property is expressed by the predicative material she combined with 'that' in forming the 'that' phrase.

²¹As mentioned in note 19, a different version of the present view would take the property determined by the speaker's intention in this case to be the property of *being identical to Ron*. Suppose that in addition to this, we held that 'that' expresses a *three* place relation between properties (as opposed to the four place relation discussed in the body of the paper): *___ and ___'s unique instance is ___*, where all three argument places are property argument places and where the second argument place is saturated by a property determined by the speaker's intentions. On this version of the view, (20) expresses the proposition that the unique instance of being a man with a mohawk and pierced eyebrow and being identical to Ron has the property of being a musician. Since presumably Ron uniquely possesses the property of being identical to Ron in all possible worlds, this version of the view would account for some of the data involving rigidity we are currently discussing without supposing that the world and time of the context of utterance get into propositions expressed by sentences containing 'that' phrases. And since sometimes speaker intentions determine properties that are not satisfied by the same thing in all possible worlds (e.g. many cases in which speakers have descriptive intentions), this version of the view would allow NDNS and QI uses of 'that' phrases to be *non-rigid*. The resulting view bears some similarity to the views of Ludwig and Lepore [1998] and Richard [1993], (though it goes beyond both in handling NDNS and QI uses). This view is interesting and worth exploring, but for a variety of reasons I have focussed on the version discussed in the body of the paper.

²²There may be some reason to doubt whether 'that' phrases are rigid. But I shall ignore such issues here. Let me briefly mention that the present proposal is importantly different from views, such as Neale's [1993] proposal, according to which 'that' phrases are, or are equivalent to, "actualized descriptions". Neale considers that view that 'that F' is "analyzed" as 'the actual F I am now demonstrating', (in fairness to Neale, it is not clear that he endorses this view). Though considerations of time and space prevent me from fully discussing the various differences between this view and the one I am defending, let me note that the two views make very different predictions in the case of NDNS uses. Recall Greg, who, knowing on general grounds that exactly one male scored one hundred on the exam and without employing any demonstration or having anyone in mind, says 'That guy who scored one hundred on the exam is a genius'. On Neale's proposal Greg's utterance is equivalent to 'The actual guy who scored one hundred on the exam and who I am now demonstrating is a genius'. Thus what Greg said is false, even if the student scoring one hundred is a genius! Indeed, on Neale's proposal *all* utterances containing NDNS uses are false, since by hypothesis demonstrations are not employed in such uses. Of course, the view I am defending does not have this consequence.

²³(21a) and (21b) represent the propositions expressed by (21) in the context in question, given the speaker's intentions. Thus 'THAT_{w,t,P*}' represents the four-place relation expressed by 'that' with two of its argument places saturated by P* and w,t.

²⁴Actually, (1) expresses the proposition that the unique instance in w,t of *being a male who scored one hundred percent on the exam and being a male who scored one hundred percent on the exam* is an instance of *being a genius*. Putting it this way makes the redundancy clear, but people have tended to think it is a typo.

²⁵Actually, the classmate asserts that Greg stands in the belief relation to the proposition that the unique instance in w,t of *being a male who scored one hundred percent on the exam and being a male who scored one hundred percent on the exam* is an instance of *being a genius*. See previous note. Further, this is taking (2) on the reading according to which the 'that' phrase takes narrow scope relative to the belief operator. Presumably, if the classmate knows the details of the case, this is the reading she intends, since on the reading where the 'that' phrase takes wide scope, (2) is false given

the way we have described the situation. Also, I have assumed that the world and time of the context of Greg's utterance are the same as those of the context of his classmate's utterance. This, of course, may not be the case depending on how far the utterances are separated in time and how large a temporal segment the time index of our contexts is. But even if the utterance of (2) is in a different context due to a difference in temporal index, it seems likely that Greg believes the proposition expressed by the embedded sentence of (2) in this context. For Greg presumably believes that the unique instance in w, t' (t' the time of the "new" context) of *being a male who scored one hundred percent on the exam* in an instance of being a genius, assuming t' isn't too long after t .

²⁶It is important to appreciate that if my intentions are not redundant in an NDNS use, then the property my intentions determine is semantically significant and affects which proposition I express *even if my audience doesn't recognize my intentions and the property they determine*. Of course, in such a case my audience won't know which proposition I express. In the example just given, if my friends were asleep when we passed the sign saying that exactly one male will attempt to swim across Lake Tahoe in ten minutes, then when I utter 'That guy swimming now must be cold.' thirty minutes later they will not know what proposition I am expressing! Still, (assuming my intentions were the same as in the original story) I have expressed the same proposition as I did in the original story. Thus, in NDNS uses in which a speaker has non-redundant intentions, one's audience won't know what proposition was expressed if they don't have access to the speaker's intentions. But, of course, the speaker still expressed it!

²⁷Actually, I don't think this is a two place relation. Rather it is a complex propositional constituent, which I call a *propositional frame* in the Appendix, consisting of the "conjunctive combination" of the two place kissing relation and the property of being a woman. However, this complex entity has two argument places and that is the crucial point here.

²⁸Given our earlier classification of intentions, I would say that the speaker has a descriptive intention in this case, but the intention determines a relation instead of a property as in the cases earlier discussed. As I am about to point out, the intention does more than merely determine a relation.

²⁹Thus it was misleading to refer to this as a property argument place. Not only does Ryx saturate this argument place in the four-place relation expressed by 'that', but also its x argument place must be "bound" by the propositional contribution of the quantifier 'Every university professor' and the y argument place must be "bound" by the propositional contribution of 'that'. Only then do we get the sentence asserting the proposition that every university professor x cherishes that y such that Ryx ("y is the first publication of x"). The interested reader should see how this works in the Appendix.

³⁰Note that 'Every father with a son dreads the moment' is not felicitous in this situation. I think this is a result of the fact, mentioned earlier, that intentions are semantically relevant to 'that' phrases and not definite descriptions, (see note 16). That (22) is felicitous and the above sentence isn't seems to me to show that QI uses of 'that' phrases are not, as some have suggested to me in conversation, simply "stylistic variants" of definite descriptions (whatever that precisely means!).

³¹This case is similar to a case described in King [1996], where I tentatively endorsed a different but related theory of 'that' phrases.

³²Note a closed *formula* may express a *propositional frame* with free variables, as a result of $f(c)$ containing free variables that are not bound in the propositional frame. Though the formalism allows this, such cases are of no intuitive interest as far as I can see.

³³Two comments on this. First, this would have to be complicated if we wanted to have sentences containing distinct occurrences of 'that', where we want different speaker intentions to be associated with the different occurrences. We would have to have f map c to a sequence of propositional frames. Our current formulation in effect unrealistically amounts to requiring distinct occurrences of 'that' in a sentence to be associated with the same intention. Second, in having $f(c)$ be a propositional frame instead of a property or relation, we avoid complication by solving a certain problem trivially. As we have indicated, in the case of QI uses, the speaker's intentions must determine not only a relation, but must distinguish between its argument places in a certain way, (in our discussion of (7), we said that the speaker's intention had to distinguish between the argument places in: y is x 's first publication, because in using the 'that' phrase, the speaker intuitively intends to talk about the first publication y

for each university professor x). By making $f(c)$ a propositional frame, we distinguish different argument places by different occurrences of variables, which will end up being bound by different “quantifier contributions” in the proposition.

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