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Against Truth-Value Gaps*

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Many things are neither true nor false: shoes and ships and sealing wax, to name a few. But these things are neither true nor false because they are not the kinds of things that can be either. There are also some things that are apt for being true or false. Preferences vary on exactly what these things are. Common candidates include utterances, interpreted sentences paired with contexts, and propositions. Can there be something that is apt to be true or false, but fails to be either? This is the question of whether there are *substantial truth-value gaps*. It has been a persistent idea in the philosophy of language that there are substantial truth-value gaps. This view was held, at some moments, by Strawson[1] and by Frege.[2] More recently, Scott Soames[3] has presented an argument in favor of the view, and has applied it to some issues related to semantic paradoxes and to vagueness. In its own right, the question is deeply involved with some of the very basic issues in the philosophy of language: content, assertion, and truth.

In this essay, I shall argue that there are no substantial truth-value gaps. There are some phenomena that appear like gaps, but they are importantly different. There are *faux* gaps, as I shall call them, but no substantial gaps. In particular, attention to the role of *context dependence*, and the ways in which utterances of meaningful sentences can fail to express propositions in some contexts, provides a rich theoretical basis for explaining away apparently substantial truth-value gaps as merely *faux* gaps. My strategy will be as follows. I shall first argue that an attractive picture of the relation of truth bearer to truth value leads to a standard that needs to be met by any account of truth values. The standard is easily met by views that do not admit truth-value gaps, but I shall argue we have no idea how a view that admits truth-value gaps could meet it. This shows, from quite general principles, that truth-value gaps are unmotivated, and indeed appear to be in conflict with some well-motivated

[1]The case of Strawson is somewhat complicated. I believe there is good reason to see the view of Strawson (1952) as advocating substantial truth-value gaps. However, there is also good reason to see the view of Strawson (1950) as advocating a different position, not requiring substantial gaps. Strawson (1954) at least appears to refer to both, without mentioning the differences.

[2]Under the obvious reading, Frege (1892) endorses substantial truth-value gaps. Some interpreters of Frege, notably Evans (1982), have raised questions about whether this position is consonant with the rest of Frege's views. As Evans reminds us, Frege did not always hold it, as is shown by the unpublished and contentiously dated "17 Key Sentences on Logic" (Frege, undated).

[3]Soames (1989), developed further in Soames (1999).

principles. I shall then argue that over and above these general considerations, we will not find any specific phenomena that require truth-value gaps. Any phenomenon whose explanation might appear to require substantial truth-value gaps can be adequately explained in other ways, by appeal to the right kind of *faux* gap. I shall pay particular attention to the ways in which context dependence can introduce *faux* gaps. My case against gaps is thus that they are poorly motivated, it is mysterious how they can be compatible with some attractive general principles, and they are useless anyway.

In the end, a full exposition of the last part of the argument would require survey of a huge range of linguistic phenomena, and I do not have the space to do more than a small sample of this. However, I shall suggest that the reasons that truth-value gaps appear unnecessary in the cases I shall consider point to some widely applicable strategies for avoiding them. Strictly speaking, this amounts only to partial evidence, but I believe the combination of lack of motivation and some general ways to avoid gaps makes it compelling all the same.

I A Framework

In this section, I shall describe some background machinery that will constitute a framework for the rest of the discussion. I shall use this framework to sharpen the question of whether there are substantial truth-value gaps, and to survey some of the motivations for thinking that there are. My arguments that there are not will begin in the following section.

Much of our focus will be on assertion. Assertions are speech acts: actions taken by speakers, which express contents. For our purposes, we may think of the contents of assertions as given by truth conditions. This is a significant idealization, and simply evades some delicate issues about the nature of content. For our concerns with truth values, however, it is harmless.[4] I shall call the truth-conditional contents of assertions *propositions*, which I shall take

[4]As an anonymous referee pointed out, this idealization does suppress a great deal about how and when propositions are expressed by utterances, as well as more standard issues of whether belief contents are more fine-grained than truth conditions. For instance, it suppresses questions about how certain aspects of sentence structure, sometimes called 'information structure' may affect whether a proposition has been expressed. (I have examined some of these issues in my (2002). For additional discussion see von Fintel (forthcoming).) It also suppresses questions of the role of certain presuppositions or conventional implicatures. (I have discussed this in my (forthcoming). For additional discussion, see Barker (2003).)

to be the primary bearers of truth. I should note, however, that in characterizing propositions by way of assertions, my stance towards the ontology of propositions is quite neutral. I find introducing them convenient, but I invite those who prefer to talk about speech acts themselves, or sentences and contexts, to carry out the needed transformation of my terminology into theirs.

We may think of propositions as sets or collections of individual conditions for truth. I shall sometimes resort to common terminology and call these possible worlds. However, this must be understood as mere terminology. Much of what is to follow is, indirectly, an investigation of the nature of truth conditions, so it would not do to build into our framework any strong commitments about their relation to modality.

Assertions are actions, but they involve the deploying of interpreted sentences in contexts.[5] It will thus be convenient sometimes to make reference to a two-stage semantic theory of the sort articulated by Kaplan (1989). Such a theory assigns to sentences and other linguistic items characters: functions from contexts to intensions. Intensions, in turn, are functions from worlds to extensions. Very roughly (very!), we may think of characters as modeling whatever meanings are assigned by linguistic rules.

Questions about substantial truth-value gaps are questions about the truth values of propositions. There have been quite a few different ideas about just what constitutes a truth-value gap. Some have suggested that it is a third truth value that could be assigned to propositions, over and above the values true and false. Others have proposed that it is rather for a proposition not to have a truth value. Others still have suggested it is a status in which any claim about truth value is inappropriate.[6] For our purposes, it will be useful to abstract away from these differences. The pro-gaps view, in any of its forms, proposes that a proposition amounts

[5] I will sometimes talk about asserting a sentence ⌜s⌝, and sometimes about asserting a proposition p, letting context and notation for sentences and propositions disambiguate. These may be taken as shorthand for 'making an assertion using sentence ⌜s⌝' and 'making an assertion with content p'.

[6] The last position seems to be that of Soames (1999), though I am not sure if it is really different from the second option. Much of the literature does not discriminate between the first two options (cf. the discussion of the Kleene tables in Kripke (1975)). Against certain background assumptions, it is possible to distinguish them. (If, for instance, we think of truth values as assigned by some computational process, then there is a difference between the process converging to a third value, and the process diverging.) However, in many settings, the formal differences between the two are trivial (cf. the survey articles by Blamey (1986) and Urquhart (1986)).

to a division of the set of all worlds into *three* classes: those in which the proposition is true, those in which it is false, and the rest. We may think of such a proposition as given by *two* sets of worlds: one of worlds in which it is true, and one of worlds in which it is false, where these sets need not exhaust the set of all worlds. By shifting from describing the pro-gaps position in terms of *three values* to describing it in terms of *two sets*, we simply avoid the dispute over how to characterize the third value. It is irrelevant for our concerns whether the two sets are generated by a three-valued function, or a partial function, or in some other way.

According to the no-gaps view, a proposition amounts to a division of the set of all possible worlds into two classes: those in which the proposition is true, and those in which it is false (= not true). We may think of this as a two-valued total function on worlds, or simply as the single set of worlds in which the proposition is true. I shall thus describe the no-gaps view as the *one-set view* (two values but one set). In contrast, the pro-gaps view is the *two-set view* (three values, or two values and in some cases no value, etc.; but two sets).

The fundamental point of contention between no-gaps and pro-gaps views is whether or not the one-set view is always adequate for modeling the contents of assertions. If it is, then there are no substantial truth-value gaps. If it is not, then the two-set view is generally right. If the two-set view is indeed generally right, then there must be cases where the two sets of a proposition do not exhaust the domain of all worlds. These cases would be substantial truth-value gaps.

Before launching into my arguments in favor of the one-set view over the two-set view, let me pause to consider some reasons one might favor the two-set view. The traditional justification for gaps proceeds by way of some examples where we are inclined to think a content has been expressed, but are disinclined to call it either true or false. As such examples appear to present us with propositions, but no truth values, they appear to demonstrate the existence of substantial truth-value gaps. I doubt there are any entirely uncontroversial examples. Historically, Strawson offered as examples cases of the failure of the presuppositions of definite descriptions. Suppose there is no lodger living next door to you, and a salesman says to you:

(1) The lodger next door has offered me twice that sum.[7]

In a similar vein, Frege (1892) offered examples of fictional names, as in:

(2) Odysseus was set ashore in Ithaca while sound asleep.

In both cases, the theoretical issues are quite involved, and final judgments on the examples may well depend on how they are resolved. Russellians will find (1) implausible, and many views of fictional names give truth values to examples like (2).

These days, many find examples of borderline cases of vagueness more convincing. Let John be borderline bald and consider:

(3) John is bald.

It is a tempting idea that an utterance of this sentence is in no way defective, and so expresses a proposition; yet because John is a borderline case, the proposition can have no truth value. However, the claim that vagueness leads to truth-value gaps is controversial. Such theorists as Williamson (1994) and Graff (2000) deny that it does. More importantly, vagueness is a difficult and puzzling phenomenon. The Sorites paradox makes it count as a genuinely hard case. Drawing the conclusion that there are truth-value gaps because there is vagueness is thus a theoretically contentious claim, as drawing general conclusions from hard cases always is. It would be far preferable to find independent justification for truth-value gaps, and then *apply* them to hard cases like vagueness, or the Liar paradox. This might offer some *explanation* of the hard cases.

For this reason, some authors have sought to abstract away from some of the difficulties of vagueness cases, with the idea of identifying what it is for a predicate (vague or not) to induce truth-value gaps. A good example is the discussion of *partial predicates* of Soames (1989, 1999). Partial predicates are predicates which wind up being assigned by semantic rules *partial extensions* (relative to context and world). A partial extension for a predicate $\ulcorner P \urcorner$ is a pair of sets of individuals: an *extension* P^+ of individuals of which the predicate holds, and

[7]This example is from Strawson (1954). In that discussion, Strawson also raises the question of whether this example might be treated along the lines I suggest in Section (IV.1). The paper appeals to Strawson (1952) for the characterization of truth-value gaps, but it also appeals to Strawson (1950) for examples, presumably meaning the infamous King of France.

an *anti-extension* P^- of individuals of which the predicate does not hold. These two sets need not exhaust the domain of all individuals, so we have the analog for predicates of the two-set view of propositions. More fully, $\ulcorner P \urcorner$ will be assigned, for each context, a function from worlds w to extensions P^+_w and anti-extensions P^-_w in those worlds. The result for an atomic sentence of the form $\ulcorner Pt \urcorner$ is a two-set proposition, consisting of $\langle \{w \mid t \in P^+_w\}, \{w \mid t \in P^-_w\}\rangle$. So long as there are some worlds where t is not in either P^+_w or P^-_w, we have a genuine two-set, partial proposition.

Soames (1989, 1999) gives us a scenario where we might see such a predicate as being introduced into the language. We are confronted with a roomful of people who fall into two groups: group (A) consists of people who are quite short, let us say four feet tall and under; while group (B) consists of people who are on the short end of average height, let us say five feet tall and over. We then lay down two stipulations governing a new word 'smidget':

(4) a. Anyone at least as short as someone in group (A) is a smidget. (Anyone of height four feet or less.)
b. Anyone at least as tall as someone in group (B) is not a smidget. (Anyone of height five feet or more.)

According to Soames, these rules introduce a partial predicate, with extension fixed by rule (4a) and anti-extension fixed by rule (4b).[8] Now consider Mr. Smallman, who is exactly four feet six inches tall. He falls into neither group (A) or (B). He hence falls into neither the extension nor the anti-extension of 'smidget' in the world just described. According to Soames, the sentence 'Mr. Smallman is a smidget' thus expresses a proposition which is neither true nor false in this world.[9]

[8]It is unclear if there are any naturally occurring examples of predicates like 'smidget', aside from the controversial vagueness ones. Soames' own position is that the truth predicate is one, but that conclusion is only correct if there are already other partial predicates which may appear in the scope of a truth predicate. As is suggested by Tappenden (1993), some legal concepts might provide examples. I shall discuss these more thoroughly in Section (V).

There are some related phenomena. There are many pairs of contrary predicates, often arising from some kind of negative affix, such as 'happy'/'unhappy' and 'honest'/'dishonest' (cf. Horn, 1989). Many gradable adjectives come in contrary pairs, such as 'tall'/'short' and 'happy'/'sad' (cf. Bierwisch, 1989). But these do not provide single predicates with partial interpretations. There are also well-known examples of *sortal* predicates. When applied outside of their sorts, these tend to generate what philosophers call category mistakes, and linguists sometimes call selectional violations. But as has been observed since Chomsky (1965), these often appear to exhibit some kind of ungrammaticality. Many current versions of thematic role theory bear this idea out. Grammaticality aside, the claim that these are examples of substantial truth-value gaps does not seem very plausible.

[9]Strictly speaking, Soames insists that it is not correct to say that (the proposition expressed by) 'Mr. Smallman

Soames (1999, 2003) goes on to apply the notion of truth-value gap so-explained to vagueness cases. I agree with Soames that it does distill the essence of how a predicate could generate truth-value gaps. In arguing against this model of gaps, I shall thus be offering indirect support for any view of vagueness that does not require gaps, and raising a question for any view that does.

Though I have stressed that all the common examples of truth-value gaps are controversial, they do indicate a case in favor of gaps. The examples point to a *pattern of usage*. They provide a range of cases where we find it decidedly *odd* to call a claim true or to call it false, while it equally sounds *odd* to hold that nothing was said by the utterance. Thus, the examples may be taken to suggest that our ordinary usage indicates the presence of gaps. Moreover, it might be argued, this usage is easily explained. Many-valued or partial logic provides a ready theory for gappy propositions. The 'smidget' model given by Soames additionally provides an explanation of how (at least some) gaps arise.

I do agree that there is something right about the intuitions associated with examples (1–4); something that in the end must be explained. But I do not think they can provide us with instances of substantial truth-value gaps. The version of the no-gaps view I shall defend may be put as follows: The one-set view is always adequate for modeling the contents of assertions. In the next section, I shall begin to explain why I hold this position in spite of the examples and intuitions to the contrary. For now, let me clarify what my position entails. As a piece of mathematics, there is nothing incoherent about the idea of two sets of worlds. Those happy with the existence of worlds and sets should grant this. There is thus a sense in which we may grant that there are such things as gappy propositions. My claim is simply that this is mere mathematics; these things cannot be the contents of assertions.

More importantly, I shall grant that there may be *some* uses for two-set apparatus in de-

is a smidget' is not true. Indeed, it seems that the only assessment pertaining to truth we can make for an assertion of this sentence by Soames' lights is the silent stare. I do find it a bit puzzling that we should have an assertion which is manifestly incorrect, but we are not allowed to say so. But more importantly, as I mentioned above, the two-set model is insensitive to this rather delicate point. When we catalog the worlds in which the claim is true and those in which it is false, we get two sets which do not exhaust the domain of all worlds, regardless of exactly what the correct way to describe the worlds in neither set might be. With this in mind, we may continue to speak of worlds in which a proposition is neither true nor false as shorthand for 'worlds which fail to fall into either set of the two-set model', without taking issue with the substance of Soames' position.

scribing language. I shall not challenge the idea that there may be reason to describe certain terms and sentences by way of characters that yield two-set-based values. What my thesis requires is that there be no use for the extra set in describing the content of an assertion. In the case of a sentence which might have a two-set based character, in a given context, either the gap between the two sets must somehow be closed in the process of an assertion expressing a proposition, or the attempt at assertion fails and no proposition is expressed. Genuine assertion is assertion of a one-set proposition.

II The Dummettian Challenge

A moment ago, I admitted that there is something right about the pro-gaps intuition associated with examples like (1–4). At the very least the pattern of usage identified is a fact. There are some cases where we are in fact *disinclined* to apply the predicates 'true' or 'false'. Yet I insist that there are no gaps. Why? I shall argue below that once we take seriously the idea that a proposition is the content of an assertion a speaker might make, the pro-gaps intuition loses its force. Indeed, once we think about matters in these terms, there is a strong countervailing intuition *against* truth-value gaps. There seems to be no more sense to be made of a proposition that is neither true nor false than there is sense to be made of an assertion that neither succeeds nor does not succeed in saying something correct. There is none. Let us call this the *no-gaps intuition*.

The no-gaps intuition is not by itself enough to constitute an argument against truth-value gaps. But, I suggest, it does provide a challenge to any pro-gaps theory. Spelling out the intuition will uncover a standard which must be met by any account of truth values. It also points to reasons why the no-gaps view can easily meet the standard, while it remains mysterious how a pro-gaps view could. This presents a challenge to any defender of gaps, to explain how they can meet the standard. In this section, I shall develop the challenge. In the following ones, I shall argue that the challenge cannot be answered, and so there are no truth-value gaps.

In extracting a standard from the no-gaps intuition, I am essentially following an observation made long ago by Michael Dummett. He remarked:

> We cannot in general suppose that we give a proper account of a concept [truth or falsehood] by describing those circumstances in which we do, and those in which we do not, make use of the relevant word, by describing the *usage* of that word; we must also give an account of the *point* of the concept, explain what we use the word *for*. (Dummett, 1959, p. 3.)

Taking this cue from Dummett, I shall spell out the no-gaps intuition in the following argument:

i. Speech acts, including assertions, are moves within a practice of using language which is (partially) rule-governed and is something in which agents can engage intentionally. As such, speech acts have *intrinsic purposes* (or points, as Dummett puts it).

ii. The intrinsic purpose of assertion is to convey the information that something is the case, i.e. to assert ⌜s⌝ is to convey the information *that* s.

iii. Combining (ii) with the idea that propositional contents encapsulate truth conditions implies a form of the 'truth-assertion platitude' for the intrinsic purpose of assertion: the intrinsic purpose of assertion is to assert that truth conditions obtain.

iv. The truth of a claim is thus fundamentally a matter of a purposive act achieving its intrinsic purpose.

Conclusion (iv) substantiates the Dummettian idea of looking for the point of the concept of truth. Assessing for truth is a matter of assessing a purposive act for success. We may thus think of truth as itself having a point or purpose, insofar as it is correctly applied exactly when a purposive act achieves its purpose. The same may be said for truth values. Classification for truth is assignment of truth value. Hence, truth values likewise inherit points from the practice of assertion. Any assignment of truth value amounts to an assessment of whether a purposive act has achieved its purpose.

This leads to the *Dummettian challenge*: Any notion of truth value must explain the point of classifying a proposition as having that value in terms of the intrinsic purpose of the speech act of assertion. In particular, any account of truth-value gaps must explain, in terms of the intrinsic purpose of assertion, the classification of neither true nor false (or lacking a truth value, etc.). Just such an account is missing from the traditional examples, and I shall argue in Section (III), missing from the Soames' partiality example as well.

In the remainder of this section, I shall spell out and defend the steps in the argument for the Dummettian challenge.[10] In doing so, we will be looking closely at the practice of assertion, and its relation to notions like truth. I hope the reason for doing so is by now clear. I am arguing that though the pro-gaps examples like (1–4) have some intuitive appeal, they do not go deeply enough to explain what a truth-value gap really is. In looking at assertion and truth, I propose to look deeper than they do. When we do, I shall argue, we find that we cannot make sense of substantial truth-value gaps. After this argument has been given, I shall return to the issue of how to make sense of the appeal of the examples.

II.1 Speech Acts and Practices

Language use in general, and assertion as a crucial kind of language use, is *purposive behavior*. In making an assertion, or any other speech act, one is trying to accomplish something. But furthermore, speech acts have intrinsic purposes, independent of the purposes speakers may have in engaging in them.[11] The purpose of assertion is to describe something, or convey information; the purpose of a command is to give an order; the purpose of a verdictive is to convict or acquit, etc. In the language of speech act theory, speech acts are *eo ipso* illocutionary acts.[12] They all have in common that their purpose is to say something, which in various ways constitutes doing something.

The purposes of a speaker may be at odds with the purpose of the speech act they perform. Typical examples of this come from the manipulation of the purposes of speech acts themselves. A spy may have as his purpose not to convey information, and even to convey disinformation, but may surmise in a particular case that making an assertion, even a true one, could have this effect. The spy, for instance, says 'The microfilm is hidden in the lacquer box' with the purpose of causing us to doubt his sincerity, and so take him not to have given

[10] My discussion draws heavily on that found in Dummett (1959), as well as other Dummettian ideas, especially about the relation of language use to practices like games (cf. Dummett, 1976, 1978).

[11] I do not want to put too much metaphysical significance on the notion of intrinsicness. I need the distinction between purposes an act may acquire in virtue of an agent bringing that purpose to the act, and the purpose the act has in virtue of being the kind of act it is. I call the latter intrinsic.

[12] Echoing Austin (1975, p. 98). Unlike some readers of Austin, I am not supposing that to call an act illocutionary is to liken it to the highly conventionalized speech acts it is natural to call 'performative'. The more clearly linguistic acts—assertions, commands, and questions—are illocutionary acts.

reliable information. He does so precisely by performing the action of presenting the information that the microfilm is in the lacquer box, but in a circumstance where he expects us to respond to his doing so in such a way as to cause us to doubt his sincerity.

Having an intrinsic purpose is a feature of a wide range of actions, but not all. Natural actions, such as moving one's hand, seem not to have intrinsic purposes. To have purposes, they need to acquire them from the agents who perform them. But types of actions which are created by practices (in the sense of Rawls (1955)) typically do have intrinsic purposes. Clear examples are to be found in games, as both Rawls and Dummett have stressed. Hitting a ball may have no intrinsic purpose, but batting does. Its purpose is to hit the ball in whatever way produces home runs. Shoeless Joe Jackson may have an ulterior purpose of his own when he is at bat, but it is still the case that the purpose of batting is to produce home runs. In the case of games, the purpose of a move in a game is fixed by the game's more general purpose: to win. Other practices may have more complex purposive structures.

Moves in practices, be they moves in games or speech acts, have intrinsic purposes because of two interconnecting features of practices. Practices are (in part) constituted by their rules, and they are things in which agents can engage intentionally. A practice creates certain sorts of moves within it, in part by laying down some rules. Hitting a ball with a stick is not batting but for the rules of baseball. Moving a crowned piece of wood and a crenellated piece of wood is not castling but for the rules of chess. As they are created by practices, these moves may be endowed with intrinsic purposes by the practices that create them.

At the same time, if the moves in a practice had no such intrinsic purposes, it would be impossible for an agent to engage in the practice intentionally. Consider a person who understands all the rules of chess, but does not understand that one plays a game generally to win, and that one makes moves to further this end. Such a person would be unable to play chess—to make moves in a chess game—intentionally. They could no doubt move pieces around the board, and they could tell you if those moves were or were not in accord with the rules. But they would have no idea what they were doing when they did so. They would have no idea what it is to make a move in chess. No more would they have any idea what could

be the result of such a move, nor what could be a reason for making one. They could thus not make chess moves intentionally.[13] They might have some private purpose that would give them some reason to want to move pieces around the board, perhaps in accord with some rules, but this would not be to play chess.

The intrinsic purposes of moves in practices are features of the moves themselves, provided by the practices that create them. As I mentioned, they must be distinguished from the purposes an agent may have in engaging in the practice. They must also be distinguished from the attendant aim the agent will have of making a move at all. A batter is, of course, trying to bat. He may fail to do so. But if he manages to bat, he does something which itself has a purpose: leading to home runs. If he does not understand that this is what batting is for, he can hardly be described as intentionally batting, or even intentionally playing baseball.

In some limited but important respects, we may say that language *use* is like a game.[14] It is a practice in being a (partially) rule-constituted activity in which people can engage intentionally. As with other such practices, an agent could know all the rules of language—syntactic, semantic, and phonological—but in ignorance of the intrinsic purposes of the moves so-constituted, be unable to engage in the practice intentionally. For instance, someone who did not understand that the point of asserting is to convey information about how the world is would be unable to form an intention to assert something, as opposed to its negation, in a given situation. The best they could do would be to mouth some rule-governed noises. This would be the case even if they understood how the rules associate sentences with propositions in contexts, and how negation changes a proposition to its contradictory. They would still not understand

[13]It should be clear that I mean *intentionally* and not *intention*ality. It might have been natural to talk about agents engaging in a practice *rationally*, but that is slightly too strong. It is possible for agents to act intentionally but violate the constraints of rationality.

[14]Some aspects of the comparison of language to practices like games are highly controversial, so I should stress that my claim is limited in scope. I am only claiming that there is a practice of language *use*. This does not require that the rules of language be exactly like the rules of a game, or that linguistic competence be like knowing the rules of a game. It is entirely compatible with the conclusions I draw here that up to the level of engaging in the practice of using language, linguistic competence is a matter of the state of a specialized language faculty governed by the principles of universal grammar, as Chomsky has it (e.g. Chomsky, 1986). This is not to say that my claim is entirely trivial, however. It is a non-trivial requirement that whatever the rules of a language are like, and whatever it is for a person to have linguistic competence, must be such as to be able to contribute to an intentional practice at the level of language use. I am suggesting that this is compatible with at least a great deal of the Chomskian picture of language. (For additional discussion, sympathetic to a substantial role for the practice of language use but sensitive to Chomskian concerns, see Higginbotham (1989)).

what they would be doing in asserting either, and so could not form the intention to do one rather than the other. They would not know whether the point is to say what holds or what does not, and thus they would not have an adequate understanding of assertion to form the needed intentions.

II.2 Truth and the Intrinsic Purpose of Assertion

So far, we have established that as moves within a practice, uses of language like assertion have their own intrinsic purposes. We have established Step (i) of the argument at the beginning of Section (II). To see how this relates to truth values, we need to move on to the next steps, and look more closely at what the intrinsic purpose of assertion is. This will establish a relation between the act of assertion and its propositional content, which will in turn provide a constraint on what truth values may be like.

In Step (ii) we observed, seemingly almost trivially, that the intrinsic purpose of assertion is to convey the information that something is the case. Though I shall not attempt anything like a full analysis of assertion, we need to fill this idea in somewhat. Our observation was that the purpose of asserting 'The cat is on the mat' is to convey the information *that the cat is on the mat*. This is not really a triviality at all. Let me stress, we are not talking about an agent's attendant aim of making an assertion at all—of making a move in the practice. We are talking about the intrinsic purpose of assertion itself—the intrinsic purpose of the very move in the practice. It is easy to imagine a practice of using a language governed by nearly the same rules as ours where assertion has a different intrinsic purpose. A child's game could easy have the purpose of asserting 'the cat is on the mat' be saying *that* the cat is *not* on the mat, for instance.

The *that*-clause in our characterization of the purpose of asserting reports a proposition. Thus, we may conclude that the intrinsic purpose of assertion is somehow given in terms of the proposition—the content—expressed by an assertion. How? We have already observed that the purpose is not adequately described as simply determining a collection of truth conditions. This does not tell us what the speaker is to attempt to do with these conditions. Spelling

out the idea of conveying information a little further, we must add that the purpose is to say that the truth conditions given by the proposition expressed obtain. In conveying the information that the truth conditions of 'the cat is on the mat' obtain, the assertion of this sentence describes the world as being some way—viz., one in which the cat is on the mat. The obtaining of truth conditions thus provides the intrinsic purpose of assertion.

We have thus established Step (iii) of the argument. This is neither an analysis of the notion of assertion nor of truth conditions. But it does point out a fundamental connection between truth and assertion. The intrinsic purpose of assertion is to say that the truth conditions expressed obtain. This purpose is achieved just when the proposition expressed is true. Thus, as it is often put, *truth is the point of assertion*.

I have defended a particularly strong version of this claim. It is not merely that one who asserts should aim to assert what is true. It is, rather, that the intrinsic purpose of assertion is given by the concept of truth conditions obtaining, i.e. of truth. As I mentioned, intrinsic purposes are purposes of moves in practices themselves. Hence, truth is the intrinsic purpose of genuine assertion: a genuine move in the practice of language use. With an eye towards the issues that will occupy us in Sections (IV–VI), this must always be distinguished from the attendant aim the agent will have, of making an assertion at all, as well as from any further purposes the agent may have in engaging in the practice. Failure to make a genuine assertion is not the failure of a move to achieve its intrinsic purpose, it is the failure for there to have been a move made at all.[15]

Once we see that truth is the intrinsic purpose of assertion, we may extract the consequence

[15]The observation that there is some such relation between truth and assertion has become quite common. Other examples, over and above the seminal work of Dummett, include Wiggins (1980), Davidson (1990), and Wright (1992). Similar ideas appear in much of the literature on truth and non-cognitivism in ethics, such as Wedgwood (1997).

In an interesting paper, Williamson (1996) argues that the unique constitutive rule of assertion is that one must assert that *s* only if one knows that *s*. He rejects a similar rule requiring only truth on grounds that it does not explain "the evidential norms for assertion" (Williamson, 1996, p. 501). From my perspective, Williamson's arguments seem to bear on a different issue from the one under investigation here. They appear to address the question of what rules control an agent's engagement in a practice, rather than the nature of the acts created by the practice itself. Nonetheless, Williamson's claim that the knowledge rule is the sole constitutive rule of assertion seems to put him at odds with my view. A more thorough discussion of this will have to wait for another occasion. (I do agree with the observation from Evans (1982) about the relation between assertion and the transmission of knowledge, which Williamson extends.)

for the nature of truth values given in the conclusion (iv) of the argument above. Assessing a proposition for truth is assessing whether the intrinsic purpose of assertion has been achieved. Though we can certainly make sense of truth outside of actual acts of assertion (as with all the better things we might have said), the truth of a proposition still comes down to the matter of whether an assertion of it—a genuine move in the practice—would have been successful in achieving its intrinsic purpose. Assessing for truth in a given world comes down to assessing whether an assertion would have been successful had things been some given way. Assessing for truth is assigning a truth value. Hence, what truth values there are and how they are assigned is fixed by the intrinsic purpose of assertion, and what ways there are of achieving or failing to achieve it.

This gives us a *standard* that any account of truth values must meet: it must show how the truth values can be understood as evaluations of assertions for success or failure in achieving their intrinsic purpose. (This bears out Dummett's suggestion that we need to ask after the point of the concept of truth.) This standard issues in the *Dummettian challenge*: to show how any account of truth values meets the standard. The challenge stands for any theory; but in particular, it is a challenge to any theory involving truth value gaps, to show how the classification 'gap' amounts to a distinct assessment of an assertion for achieving or failing to achieve its intrinsic purpose.

III The *Prima Facie* Case and Partial Predicates

In Dummett's hands, this challenge was already enough to turn aside the kind of argument based on mere appeal to intuitions about examples like (1–3). We may grant that it appears odd to call certain assertions true or false; but this is not enough to meet the challenge, for it fails to tell us anything about what the point of the classification neither true nor false is. It fails to tell us how to understand this classification as an assessment of whether the assertions have achieved their intrinsic purpose.

Furthermore, we may combine the Dummettian challenge with the no-gaps intuition I mentioned at the beginning of Section (II), to begin to build a case against truth-value gaps. The

intuition amounts to the observation that the no-gaps view has no difficulty in meeting the Dummettian challenge. We simply observe that the value true corresponds to the intrinsic purpose of an assertion being achieved, and false corresponds to it failing to have been achieved. It appears evident that these are the only ways an assertion can be assessed for whether it has achieved its intrinsic purpose. It either has or has not done so. Hence, true and false exhaust the truth values, as the one-set view has it. (There is, of course, the additional possibility that a speaker could fail to express a proposition—fail to make a genuine move in the practice that has an intrinsic purpose at all. But this cannot introduce *substantial* truth-value gap, as I shall discuss in Section (VI).)

More cautiously, we may note that it is at the very least mysterious what other alternatives for assessment there could be, and thus mysterious how things could be the way the two-set view requires. This is what I shall call the *prima facie* case against truth value gaps: a one-set, gap-free theory has no trouble meeting the Dummettian challenge; while it is at best mysterious how any two-set, pro-gaps theory could meet the challenge.

The *prima facie* case is just that: *prima facie*. We need an argument that no two-set theory could meet the Dummettian challenge. Ultimately, as I said, this will come down to investigating a range of examples. In this section, I shall consider some general reasons why attempts by two-set theories to answer the Dummettian challenge fail, including Soames' model of partial predicates. In the next section, I shall turn to some more specific strategies for turning aside potential examples.

III.1 Conditional Bets

The *prima facie* case relies on the idea that assessment for whether a purpose has been achieved is a binary matter: it either has or it has not. This is in a way too quick, for there are practices in which assessment for achieving intrinsic purposes is more complex. Dummett (1959, 1978) considered a model for practices in which assessment can have a ternary structure, just as a two-set view would have it. In arguing that assertion cannot be understood along the lines of this model, he thereby bolstered the *prima facie* case.

Dummett's model is a practice of making conditional bets. Most bets are conditional in the following way. We bet on a match between teams X and Y. You bet $10 that team X will win, while I bet $10 that team Y will win. If I am correct, I get $20—my $10 and yours as well. Conversely, if you are correct, you get $20. But there is a genuinely distinct third possibility. If the match is rained out, or there is a tie, then the bet is null. In this case, neither of us wins, and we each get back our original $10. This is a demonstrably different outcome, as it results in a different pay-out. We may describe this bet as conditional, as it is conditional on the match being played to a victory that one or the other of us wins. But no winner does not mean no bet was made. A genuine move in the practice of betting was made, just one that has a distinct outcome from either of us winning.

This sort of move in the practice of betting has an intrinsic purpose with a ternary evaluation structure. Success in achieving the purpose is still just success, but the practice itself makes it the case that there are two different ways to fail to achieve the purpose. A better can fail by losing to someone else, or by the condition for there being a winner not being satisfied. The practice ensures that these are different, and marks it by assigning them different consequences. The condition for winning not being satisfied precludes either party in the bet from winning, so neither achieves their purpose. This outcome might thus be usefully compared with a status of being neither true nor false.

The two-set view might take heart from the model of conditional bets. It is a practice which provides a ternary evaluation structure that works much like the two-set view needs for assertion. But as Dummett observed, we have no way to apply this model against the *prima facie* case. To do so we would have to make sense of a notion of assertion along the lines of the conditional bet model. This would have to be a speech act that is fundamentally like an assertion, is assessed as an ordinary assertion of its consequent if its antecedent condition holds, but is assessed as if no assertion where made if the antecedent fails. It would not be sufficient to apply the model to appeal to cases where a speaker might assert that some appropriate sort of dependence holds between antecedent and consequent, or to the act of forming an intention to assert only upon some antecedent being satisfied. Nor would it be

sufficient to appeal to cases where a speaker attempts to assert but fails—fails to make a genuine move in the practice—because some condition does not hold. Rather, what is needed to apply the model is a genuine speech act which is like an assertion upon some condition holding, but otherwise as if no genuine move had been made.

I doubt we can really make sense of such a speech act as it is described. The joint requirement that it both be a genuine speech act, but in some cases as if no speech act were made, is nearly incoherent. As Dummett observed, the best we can do is to understand it as an act which would be assessed as incorrect—failing to achieve its intrinsic purpose—just in case the antecedent condition were true but the consequent false. But this is indistinguishable from the ordinary assertion of the material conditional. The practice of language use, unlike that of betting, does not give us the resources to describe the needed kind of conditional assertion: one which would explain the status of neither true nor false as an assessment for whether or not an assertion has achieved its intrinsic purpose. Thus, the model of the conditional bet does not really provide any help against the *prima facie* case. The Dummettian challenge still goes unanswered.[16]

III.2 Partial Predicates

In looking at conditional bets, we have now seen that some general considerations of what a model for truth-value gaps might be like fail to provide a response to the *prima facie* case. But it remains to be seen why partial predicates, like the one in example (4), cannot provide a model. Unlike a mere appeal to intuition about examples like (1–3), (4) attempts to offer an explanation of why there is a truth-value gap. Even so, I shall argue in this subsection that

[16]I hasten to note that I am only endorsing Dummett's argument insofar as it shows that we cannot appeal to a notion of conditional assertion to answer the Dummettian challenge. I do not mean to say anything substantial about conditionals *per se*. I am not endorsing the material conditional analysis of natural-language conditionals, nor am I maintaining that speech acts involving conditionals must be ordinary assertions (and so have truth conditions). I do not insist that there are no speech acts which could reasonably be called conditional assertions, nor that these could not be usefully applied to the analysis of conditionals. I only claim that this will not give us a way to answer the Dummettian challenge. I am inclined to think that objections to Dummett's argument, such as those in Edgington (1995), take him to be saying something much more substantial about conditionals, but matters of interpretation aside, I do not believe they bear on my highly limited claim.

I am aware of one attempt, by Belnap (1970), to provide a somewhat more formal model of a related notion of conditional assertion. Perhaps due to his insistence on "depragmatizing" the notion, however, he does not really seem to address the matter that is at issue here. The comments by Dunn (1970) and Quine (1970) bear this out.

partial predicates offer no help in meeting the Dummettian challenge.[17]

A partial predicate theory proposes to explain the source of a two-set model as follows. Take an atomic sentence $\ulcorner Pt \urcorner$ where $\ulcorner P \urcorner$ is a partial predicate. According to the theory, $\ulcorner Pt \urcorner$ expresses a proposition that is true in a world w if $t \in P^+_w$, and $\ulcorner Pt \urcorner$ expresses a proposition that is false in w if $t \in P^-_w$. If for some w, $t \notin P^+_w$ and $t \notin P^-_w$, then the proposition expressed by $\ulcorner Pt \urcorner$ is neither true nor false in w.[18] Soames' own example attempts to show further how we can get a predicate like $\ulcorner P \urcorner$ by laying down certain sorts of rules.

None of this really helps to answer the Dummettian challenge at all. It is true that the semantics of $\ulcorner P \urcorner$ can generate distinct values corresponding to $t \in P^+_w$, $t \in P^-_w$, and neither. But to answer the challenge, we would have to explain how these outcomes correspond to success or lack of success in an assertion achieving its intrinsic purpose. Simply introducing partial rules, and describing three outcomes in terms of them, does nothing to address this. At best, the appeal to partial predicates causes the challenge to reemerge with more details about subsentential structure. Asking about the intrinsic purpose of asserting a sentence like $\ulcorner Pt \urcorner$ may be put as a question about the intrinsic purpose of predicating P of t. An answer to the challenge, in this special case, would be an explanation of how the intrinsic purpose of predicating P of t generates a ternary evaluation scheme. Simply giving a partial semantics for $\ulcorner P \urcorner$ does not even attempt this.

Furthermore, we can repeat the *prima facie* case with similar attention to subsentential structure. The purpose of asserting $\ulcorner Pt \urcorner$ is to describe t as having property P. This purpose has been achieved if t does bear P, otherwise it has not. This indicates a binary evaluation scheme. We can no more make sense of a third classification, corresponding to t neither bearing nor not bearing P, than we could make sense of an act neither succeeding nor not succeeding in achieving its purpose, just as we observed for truth and assertion. This leaves the

[17] Dummett's original argument was targeted at the notion of *logical presupposition* advocated by Strawson (1952) (and probably by Frege as well), as opposed to the notion of what Soames (1989) calls expressive presupposition, advocated by Strawson (1950). Soames rightly points out that the model of partial predicates does not rely on the idea of logical presupposition. Nonetheless, I shall argue that the Dummettian argument applies to it just the same.

[18] As I mentioned in Footnote (9), Soames' preferred description of the case is that we may not say anything about the truth status of the proposition. As I mentioned there, this difference is not important for the issue at hand, as it still leads to a two-set view.

point of the assessment $t \notin P^+_w$ and $t \notin P^-_w$ just as mysterious as the point of the assessment neither true nor false was according to the *prima facie* case. The appeal to partial predicates does not advance the cause of truth-value gaps on this front at all.

I believe that the mistake Soames makes is to emphasize the rule-governed aspects of language but forget the purposive aspects of language use. As we observed in Section (II.1), just stipulating some rules is not automatically enough to provide an intrinsic purpose for a move in a practice. Asserting a sentence like $\ulcorner Pt \urcorner$ is to classify t as having P. Thus, if asserting such a sentence is to have an intrinsic purpose, there must likewise be an intrinsic purpose to classifying by P. A genuine predicate must provide an intrinsic purpose for classifying according to it. The 'smidget' rules do not by themselves provide such a purpose.

Compare the 'smidget' case with another. Children on the playground often play games that involve calling each other made-up names. It is familiar dialog: 'You're *blynj*...No, I'm not, you are'. Terms like 'blynj' can have rules much like the 'smidget' rules. As used by one group of children, it can be governed by the rules that you call Alice and Bill blynj, you say that Charlie is not blynj, and the rules are that you don't say anything about Debbie at all. (We don't play with her!) Thus, the rules of the playground assign to 'blynj' an extension and an anti-extension.

Nonetheless, 'blynj' remains a nonsense word. In spite of the rules, calling something 'blynj' does not amount to trying in any way to describe something. No proposition is expressed in saying 'Bill is blynj'. Nothing truth-evaluable is presented in the act. Indeed, such acts have no *illocutionary* force at all. That is just not the kind of point the game has. For whatever reason, the children find it fun to say these things. That is the point. This may reflect in some way their opinions about the other children, but they are not reporting these opinions in propositions expressed. They are not trying to describe the other children. They are trying to have fun, and that is not something which is assessed in terms of truth value. We can say that the children ought not to say that Bill is blynj, perhaps because it upsets Bill. But this is not to offer the kind of practice-internal assessment we would need. It is just to say that the children should not play the game they are playing. We might introduce the genuine predicate 'is called 'blynj'

in this game', but that is not in any way a move *in* the game, and furthermore, is not a *partial* predicate at all.

Like the 'blynj' rules, for the 'smidget' rules to introduce a genuine predicate, they would need to provide a point, an intrinsic purpose, for classifying according to them. We do not usually need to specify such a purpose explicitly. We do not usually need to specify the intrinsic purpose of playing a game, as it is obvious to anyone who understands games in general once they are told the winning state of the game. Likewise, we do not usually need to specify the purpose of using a predicate, as it is transparently to describe an object as having the property expressed. But if we were to insist on allowing for truly partial predicates, this would not be enough. If confronted with Mr. Smallman, we would be left asking what the point of applying the predicate 'smidget' to him might be. Following out the *prima facie* case, it seems that any way of answering this question would classify him as a smidget or not one. If the purpose was to classify people for being particularly short, we would simply check the (4a) rules and conclude Mr. Smallman is not a smidget. If the purpose was to classify people for not being particularly tall, we would conversely check the (4b) rules and conclude Mr. Smallman is a smidget. If we cannot give either answer, it is mysterious what the purpose of applying the predicate is.

I thus conclude that the machinery of partial predicates by itself does not provide a way to overcome the *prima facie* case against truth-value gaps. To anticipate some of what is to come next, let me stress that this is not to conclude that a predicate like 'smidget' is incoherent. It only shows that if it is to be used to make a genuine assertion, that assertion must express a one-set proposition. How this could be done with partial semantic values like that of 'smidget' will be examined in Section (IV.2).

We have seen that neither the conditional bet model nor the partial predicate model provides a way to meet the Dummettian challenge. How a two-set view could meet the challenge remains mysterious. Moreover, our investigation has shown that two of the more likely models for meeting the challenge fail to make any progress at all. This gives us good reason to doubt there is any way the two-set view could meet the challenge. As the one-set view can easily meet

the challenge, we have good reason to hold the one-set view over the two-set view.

IV Closing Gaps

We now have some solid reasons for rejecting truth-value gaps. We have seen that any two-set theory must meet the Dummettian challenge, and we have seen that upon further investigation, it is mysterious how they could. We have reason to doubt that anything will outweigh the *prima facie* case.

This is not yet conclusive, however. First of all, we have not yet faced directly the intuitions that originally seemed to favor gaps. Instead, we have worked at a very high level of abstraction, and at that level rejected some general models of gaps. This shows that it is advisable for the pro-gaps view to shift its approach. Rather than look for a way to answer the challenge at such a high level of generality, it will be better for the pro-gaps view to return to specific examples of phenomena which can allegedly only be explained by appeal to gaps. The pro-gaps view could then argue that because such phenomena are present, the practice must make room for gaps. The view could also insist that whatever explanation of the point of gaps may be needed will follow from an explanation of the phenomena. The *prima facie* case is wrong, the pro-gaps view would thus argue, because it failed to look at the details.

I shall now attempt to argue that this approach will not succeed either. Ultimately, this is a tall order, for I believe that a full elaboration of the argument would require detailed investigation of a huge range of natural-language phenomena. The details do matter here, and I shall not be able to look at very many of them. Instead, I shall offer two strategies for showing that phenomena purported to require truth-value gaps do not really require them. I shall apply these to the examples we have considered, especially that of partial predicates. This will, I hope, lend credence to the tentative conclusion that any phenomenon apparently requiring gaps can be explained some other way. It then follows that the *prima facie* case is correct, and there are no truth-value gaps.

IV.1 The Gap-Closing Strategy

Some potential examples of truth-value gaps might appear to call for a systematic gap-closing strategy. Fregean examples of reference failure, such as (2) on its Fregean interpretation, may be addressed by such a strategy. These examples are supposed to provide non-referring names, and assertions of sentences containing them which express propositions. (I am *not* agreeing that we can have such a case, but only considering what might follow if we do.) The Dummettian challenge already turns aside the intuitive judgment that these propositions are neither true nor false. It suggests that insofar as a proposition is expressed in an example like (2), it must be false.

However, the pro-gaps view might seek to provide an argument that this is not an acceptable answer. Such an argument might be based on interactions with negation. Suppose we have a non-referring term $\ulcorner n \urcorner$, and an assertion of a sentence $\ulcorner Fn \urcorner$ which expresses a proposition. It is evident that the proposition expressed cannot be true. But it might be held that the proposition expressed by $\ulcorner \neg Fn \urcorner$ cannot be true either. If reference failure leads to non-truth, it might be said to do so in either case. But if our only other option is false, then we have the propositions expressed by $\ulcorner Fn \urcorner$ and $\ulcorner \neg Fn \urcorner$ in the same context both false. This is unacceptable, as it conflicts with the fundamental principle that *negation* must map false to true.

It might be argued that truth-value gaps are precisely what we need to avoid this problem. With truth-value gaps, the problem can be solved by appeal to the three-valued table for so-called internal negation:

p	$\neg p$
T	F
F	T
$\star$	$\star$

(We may think of $\star$ as a third value, or no value, or in any other way compatible with the two-set view.) If the proposition expressed by $\ulcorner Fn \urcorner$ is assigned $\star$, this table shows that the

proposition expressed by $\ulcorner \neg Fn \urcorner$ should also be assigned $\star$, without contradicting any principles of negation. Thus, having gaps appears to solve the problem.

Dummett (1959) observed that we do not need substantial truth-value gaps to make use of this solution. Hence, even if it is the only solution available (which may already be doubted), it still does not give us a reason to require truth-value gaps. Generally, Dummett provides us a way of making use of many-valued logic without admitting substantial truth-value gaps. We simply think of the additional values as distinguishing different *ways* of being false (or true, if we like). We keep track, for instance, of false-as-the-result-of-reference-failure as opposed to false-as-the-result-of-not-bearing-a-property by distinguishing F and $\star$. We may use this distinction to explain the ways propositions embed under operations like negation, by providing tables like the above. But in doing so, we may still insist that F and $\star$ are both ways of being *false*. So, in assessing a claim, we count both as failure to achieve its intrinsic purpose. We may keep to the two-fold evaluation scheme provided by the *prima facie* case, and still use all the resources of many-valued logic.[19]

This amounts to a kind of gap-closing strategy. Gaps are closed by making potential gap values into subspecies of one of the genuine truth values. If there are real examples of Fregean reference failure, as (2) is supposed to be, this strategy may be applied to them to show they do not lead to substantial truth-value gaps. The strategy might be applied more widely. It could be applied to the 'smidget' case, but I shall suggest below that there is a more refined strategy that is appropriate for partial predicates. Regardless, this sort of gap-closing technique gives us a flexible way to account for logical phenomena without undermining the *prima facie* case. It shows one way to have the benefits of gaps, including many-valued or partial logic, without really needing substantial truth-value gaps themselves.

[19]Dummett (1959, 1976) describes this as the distinction between *assertoric content* and *ingredient sense*. At the level of the contents of assertions, we still have a binary evaluation scheme, but at the level of describing the ways propositions embed—provide ingredients to other propositions—we may use a ternary scheme.

Formally, this is just the idea that in a many-valued logic the consequence relation is determined by which truth-values are *designated*. Though we have many values, we have two classes: designated values and non-designated values. In the standard three-valued logics, the value T is designated, while both F and $\star$ are undesignated. Truth in the sense of the point of assertion becomes the idea of designated value.

IV.2 Partial Predicates Revisited: The Contextual Gap-Obviating Strategy

The gap-closing strategy gives us good reason to doubt we will find examples that require truth-value gaps in global interactions between propositions, like those described by logical operators. But what of examples based on partial interpretations, as in (4) and (allegedly) (3)? Above, I argued that partial predicates on the model of (4) do not provide an answer to the Dummettian challenge. It might be replied, however, that there is no other way to explain the kind of behavior they present than to appeal to truth-value gaps. Thus, it might be insisted, there must be gaps, puzzling or not.

I this subsection, I shall show that this argument cannot work. I shall introduce a second strategy for avoiding substantial truth-value gaps, based on the effects of *context*. I shall show how we can use this strategy to incorporate the kinds of rules given in Soames' example (4) in a way that does not lead to substantial gaps. We can explain the puzzling behavior of this sort of example without them.

Let us consider again the kinds of rules that might lead to partial predicates; but this time, paying more attention to the role of *context*. The natural setting in which we lay down rules like those of (4) is one in which the *contextually salient* people fall into two groups. In the 'smidget' case (4), the contextually salient people fall into group (A) of very short people, and group (B) of people not particularly tall.[20] We use this division to introduce the predicate 'smidget'. In this context, this makes perfect sense. But observe, in this context, dividing the salient people into two groups is precisely and exhaustively to classify them. Those that are not in group (A) are in group (B), and vice versa. Relative to such a context, we may use the term 'smidget' with the usual purpose of predication: to classify according to whether objects bear some property or fails to bear it. We need say nothing more specific about the point of using this predicate, as in this context, partiality plays no role.

It is tempting to abstract away from the specifics of context to conclude that we have thereby introduced a functionally partial predicate. The predicate 'smidget' only works as if

[20]Soames explicitly says we have "assembled two groups of adults in the room" (Soames, 1999, p. 164). I assume that we do so in a way that makes only them contextually salient, in the case where the introduction of 'smidget' seems to work.

total because of highly specific aspects of the context. But the rules of (4) appear to work in other contexts as well. They describe an extension (people of height four feet or less), and an anti-extension (people of height five feet or more) even in contexts where these groups do not exhaust the contextually salient individuals. As Soames himself notes (Soames, 1999, p. 165), in introducing 'smidget' this way we have provided ourselves with an evidently useful, and seemingly meaningful term. As it is a term whose rules introduce an element of partiality, why have we not thereby introduced a partial predicate?

We have indeed introduced a term governed by partial rules. When we write out the character of the term 'smidget', we will have to build in some partial extensions for it to follow the rules we have laid down. But I maintain that we may accept such terms without thereby accepting substantial truth-value gaps. Compare the smidget context with a slightly different one. We gather the people in groups (A) and (B) in a room, but also place Mr. Smallman in the middle of the room. In such a context, simply pointing to the two groups (A) and (B) would just raise the question of where to put Mr. Smallman. If we refuse to answer the question, we are back to requiring some special story about how we are really classifying the individuals, and how we are really introducing a genuine predicate by doing so. The defense of the *prima facie* case has given us reason to doubt there can be any such story.

Whether or not an attempt to deploy a predicate like 'smidget', governed by partial rules, is successful depends on the context in which the attempt is made. The examples we have considered suggest that an attempt may be successful only in a context where somehow, in spite of the partiality in the rules, a one-set proposition is expressed. The attempt may be successful only if context obviates the gap between the extension and the anti-extension by rendering it contextually irrelevant.

We thus have a contextual strategy for closing gaps. We may allow partial predicates, or other sorts of terms with rules that introduce some partiality. In a given context, an assertion involving such a term will only express a proposition—only be a genuine assertion—if the context obviates the gap by rendering it contextually irrelevant. Only if the context allows for the partial rules to produce a one-set proposition is a proposition expressed at all. This is

entirely consonant with the *prima facie* case. Any genuine move in the practice, any assertion, will express a one-set proposition. When we appeal to two-set, partial apparatus, we do so only as a way to extract a one-set proposition in favorable contexts. We need not tell any additional story about how a two-set classification relates to the intrinsic purpose of assertion, for these sets will not figure into the contents of assertions. Genuine evaluation for truth—assessment of assertions—is just as the *prima facie* case has it.

Let me offer some suggestions for how context may have this kind of effect. My goal is to make the contextual strategy plausible, rather than to develop a particular approach in full. To fix some details, let $\ulcorner P \urcorner$ be a 'smidget'-like predicate. $\ulcorner P \urcorner$ has an intension $[\![P]\!]: w \mapsto \langle P^+_w, P^-_w \rangle$, where for some worlds, P^+_w and P^-_w do not exhaust all the individuals in that world. We normally expect a predicate introduced by rules like the 'smidget' rules to have a constant character. It does not behave like an indexical, which changes its intension from context to context. So if we like, we can think of the character of $\ulcorner P \urcorner$ as the constant function from worlds to $[\![P]\!]$. Granting that $\ulcorner P \urcorner$ has a well-defined character crudely reflects that $\ulcorner P \urcorner$ is a well-defined, meaningful term.

When we look for ways to obviate the gap between P^+_w and P^-_w, it will not suffice to look only at the world in which an assertion takes place. Even if in that world there is nothing contextually relevant in the gap, there will be many similar worlds where this is not the case, and they could produce a gappy proposition. In the 'smidget' case, suppose among the people in group (B) is Ms. Tall, who is exactly five feet tall. It is no doubt possible for her to be a few inches shorter. Now consider the sentence:

(5) Ms. Tall is a smidget.

In a world w where she is six inches shorter, the character of (5) produces a gap. To obviate the gap, we have to rule this situation out, even if it is only a possible variant on the context.

To see how context might do so, we may make use of (a somewhat simplified version of) the account of assertion in Stalnaker (1978). I have described the intrinsic purpose of assertion as to convey information, or to say that the world is some way. This requires providing a proposition, which gives the conditions that are in accord with the world being that way. A

genuine assertion thus divides the possible worlds into those that are in accord with what we are saying, and those that are not. But as Stalnaker stresses, such an act takes place against a background of information. To convey information, one need only provide it relative to a background of shared information: a background of pragmatically presupposed propositions. This information fixes a collection of worlds that are in accord with the information presupposed, which Stalnaker calls a *context set*, and which we may think of as the set of contextually salient worlds. To successfully make an assertion, *we need only divide the worlds in the context set*.

How do we divide these worlds? Very roughly, by relying on the characters of the sentences asserted. For a given sentence $\ulcorner s \urcorner$, the character of $\ulcorner s \urcorner$ is a function from worlds to intensions. For any well-formed context, the character of $\ulcorner s \urcorner$ will have the same value on all the worlds within the context set. Thus, for a given context set C, the character of $\ulcorner s \urcorner$ may be assumed to provides an intension $[\![s]\!]_C$ which maps worlds to truth values. So long as $[\![s]\!]_C$ has the value true or false in each world in C (puts it in one set or the other, on the two-set model), it divides the worlds in C as needed.

We may now apply this to a partial predicate like $\ulcorner P \urcorner$. For a given context set C, $[\![P]\!]_C$ is a function from worlds to extensions. So long as for any world $w \in C$, P^+_w and P^-_w exhaust the individuals in that world, for the purposes of dividing the worlds in C, $\ulcorner P \urcorner$ behaves just as if it were a total predicate. Thus, for making assertions in C, nothing additional needs to be said about the intrinsic purpose of classification.

This idea may be refined in many ways. For instance, contexts generally provide domains of salient individuals, not always taken to be all the individuals in the contextually salient worlds. We may thus think of a context as providing not only a context set C, but also a domain of individuals I_C, presumably a subset of the individuals in each world in C. In such a context, genuine assertions must always be about the individuals in I_C. Thus, so long as a predicate like $\ulcorner P \urcorner$ divides I_C totally (for each $w \in C$, $(P^+_w \cup P^-_w) \cap I_C = I_C$), $\ulcorner P \urcorner$ behaves contextually like a total predicate, and we may successfully use it without contradicting the *prima facie* case. The context I sketched for the introduction of the term 'smidget' might be taken to be like this. We

are confronted with two groups of individuals, who comprise the set of salient individuals I_C of the context. So long as we presuppose enough about their heights, the context set will be restricted to worlds which share the property of the actual world, of the established extension and anti-extension of 'smidget' exhaustively classifying the salient individuals of those worlds.

Using techniques like this, we may do justice to both the idea that the kinds of stipulations like those for 'smidget' do seem to lay down perfectly good rules, and to the *prima facie* case's conclusion that we cannot understand the intrinsic purpose of using a functionally partial predicate. We may have both at the same time. We may have rules that produce partial extensions, and these may well induce correspondingly partial intensions and characters. We may grant that these rules characterize expressions that are meaningful, and may figure into fully grammatical or otherwise well-formed sentences. But we may still insist that successful use of such an expression is restricted to contexts where the gaps introduced by the rules are made irrelevant by the context. We thus understand the intrinsic purpose of using a predicate along the binary lines upon which the *prima facie* case insists.

Once we see how this strategy works, we can see how there may be much more sophisticated contextual gap-obviating strategies as well. We have so far considered only predicates like 'smidget', which have their extensions and anti-extensions fixed by context-independent rules. Consider instead the predicate 'lidget', which is introduced in a manner similar to that of 'smidget'. In the same setting as that for 'smidget', with the two groups (A) and (B), suppose there is also a contextually salient standard of similarity. Such a standard might be determined by our interest in who could be a basketball player, or a jockey. We then say:

(6) a. Anyone like a member of group (A) is a lidget.

b. Anyone like a member of group (B) is not a lidget.

As the comparison 'like' is going to be context-dependent, we may expect this predicate to have a non-constant character.

Now consider again Mr. Smallman. A context which fixes a contextually salient standard of similarity by way of our interest in choosing basketball players may well be one which fixes that Mr. Smallman is a lidget in all contextually relevant worlds. Likewise, a context which

fixes a standard of similarity by way of our interest in choosing jockeys may well fix that Mr. Smallman is not a lidget in all contextually relevant worlds.[21] The details will depend on a plausible analysis of the term 'like', and its relation to context, so I shall not attempt to provide them here. My point is that we need not see context simply as working to rule out individuals as not salient. It may also work with the rules that fix the extensions and anti-extensions of a term to help extend them to cover all the contextually salient individuals.

The result is that if there really are predicates like 'smidget' or 'lidget', they may be handled by a contextual strategy that obviates the gaps built into their semantics. This has the result that these predicates will carry substantial pragmatic presuppositions, which can lead to failure to express propositions in some contexts. I thus propose to assimilate some of the more troubling cases of gaps to the already familiar phenomenon of pragmatic presupposition failure.[22]

We now have seen two strategies for accommodating phenomena that may seem to generate truth-value gaps without them. The gap-closing strategy, introducing additional values but counting them as subspecies of one of the genuine values, allows us to use the techniques of many-valued logic without admitting substantial truth-value gaps. This strategy may be used to avoid examples of gaps like (2). The contextual gap-obviating strategy allows us to use rules which introduce partiality into semantic values, but still not admit two-set propositions as the contents of assertions. This strategy may be used to avoid examples of gaps like (4). (Those who find (1) at all convincing may apply either strategy.) This leaves the vagueness examples like (3), which are our next task

[21]This example is similar to one found in Graff (2000).

[22]There are a number of further issues related to these sorts of presuppositions to be explored. Let me mention a couple. Like most presuppositions, it appears these can be satisfied by conditionalization, as well as by features of the extra-linguistic context. So, for instance, if Mr. Almost is just a fraction of an inch above four feet tall, then 'If everyone were either shorter than four feet or taller than five, then Mr. Almost would be a smidget' appears to express a proposition, presumably a true one. This behavior is common to presuppositions, as has been stressed by van der Sandt (1992). We similarly see 'If France had a King, the King of France would be a Bourbon' and 'If Nader had voted for Bush, he would have regretted it'.

I should also mention that I do not think presupposition failure is always *sufficient* for expression failure. This raises a number of complications, which I do not have space to address here. I have investigated some of them in my (2002; forthcoming).

IV.3 Vagueness and Determinateness

In Section (I) I suggested that vagueness examples like (3) are sometimes taken as the best case for truth-value gaps. In this subsection, I shall discuss why the contextual gap-obviating strategy, together with the *prima facie* case give us good reason to reject this case. I shall briefly also discuss some related issue about vagueness, determinateness, and gaps.

It is commonly recognized that vague predicates are highly context dependent. This invites explaining away cases like (3) as *faux* gaps by the kinds of context-dependent mechanisms towards which I gestured in the discussion of (6). A good theory of vagueness along these lines requires much more development, but promising work along these lines has already been done by Raffman (1994, 1996) and van Deemter (1996). A great deal of work on the linguistics of gradable adjectives supports this work, including Klein (1980) and Kennedy (1997). My own preferred context-dependent approach to vagueness is the 'interest-relative' theory of Graff (2000). As Graff makes clear, though much of this work does not require bivalence, it equally does not require truth-value gaps.[23]

In light of this, a methodological remark is in order. To helpfully apply a device like truth-value gaps to highly problematic cases like vagueness or like the Liar paradox, what is really needed is an *independent* idea of what truth-value gaps are, which could be *applied* to explain what is happening with these problematic cases. I applaud such theorists as Soames and Tappenden (1993) for attempting to do so. But the arguments I have given here show why I do not think their attempts, or indeed any account of truth-value gaps, can really do the job. Indeed, I believe the arguments given here show truth-value gaps to be mysterious to the point of being unintelligible. This renders their application to vagueness unhelpful, and theoretically costly. This conclusion is to work in tandem with more specific developments, such as the context-dependence approaches to vagueness I just mentioned (or the epistemicist approach to vagueness of Williamson (1994)). The lack of independent justification for truth-value gaps

[23]Graff makes clear that though vague predicates are context dependent, her theory is not simply a context-dependence theory. I am inclined to agree that there is more to vagueness than context dependence. But all I need to establish here is that the work that might have been done by truth-value gaps in an account of vagueness can be done by context dependence as well. Indeed, it would be enough to show it could be done by some boundary-shifting mechanism, be it context or something else.

strengthens the case made by such work, while the availability of bivalent approaches to problems like vagueness strengthens the case I have made here.[24]

There is much more to be said about vagueness, but I think this is sufficient to turn aside the worry that vagueness itself simply establishes the existence of truth-value gaps. Though I shall not say very much more about this matter, there is one further issue that is worth examining, to bolster the case that bivalent approaches to vagueness have the required theoretical strength to succeed. The issue I have in mind is the relation of gaps to *determinatess*.

There is a sense in which we take borderline cases of vagueness, such as (3), to be somehow indeterminate. In contrast, we take clear non-borderline cases to exhibit some kind of determinateness. A person with no more than two hairs on their head would be determinately bald. It it tempting to say that this contrast is what requires truth-value gaps for vague predicates. The status of being indeterminate, it might appear, is the status of a proposition lacking a truth value, i.e. it is precisely the status of substantial truth-value gap. Similarly, it might be supposed that an adequate semantics for operators like *determinately* requires a gap-based framework.[25] At the very least, it stands as a challenge to explain how determinateness operators work without appealing to gaps.

I shall briefly indicate how a context-dependence approach might go about accounting for determinateness. Again, I shall be quite sketchy, as I mostly need to establish, in light of the *prima facie* case against gaps, that we are not left helpless to address the difficult phenomena of vagueness. The basic strategy I shall investigate is to assimilate phenomena of determinateness and indeterminateness to those of situations of *ignorance of context*.

Let me begin with an example. Suppose you join a conversation late, and so are not up-to-date an all the relevant features of the context. You hear an assertion of:

(7) It has two axles.

[24]The same may be said for the non-gap-based approach to the Liar paradox I have offered in my (2001; MS).

[25]An important example of this is given by the application of partial predicates to vagueness by Soames (1999, 2003). It is also typical of supervaluational approaches, such as Fine (1975). A supervaluationist approach to determinateness is also to be found in McGee and McLaughlin (1995), but they also posit a disquotational and bivalent notion of truth, over and above determinate truth (in their terminology, "definite truth," which they identify as a correspondence notion). Determinateness is, as has been much-discussed, closely connected with the difficult issues of higher-order vagueness.

You may have no idea what is being asserted, as you are not yet have gleaned what the contextually determined referent of 'it' is. Ignorance of this aspect of context can make for ignorance of the proposition expressed by this assertion (assuming there is one). But, in some cases, we may work around this. Suppose you know enough about the context to conclude that 'it' refers to a car. Then, you have reason to conclude that what was said was true, even if you do not know precisely what proposition it is.

How can you do this, without access to the propositional content? One model is this. You have enough information to conclude that any context compatible with what you do know about the context, including that 'it' refers to a car, is one in which the proposition asserted is true. We can think of what you know about the context as placing constraints on contexts. Any context meeting these constraints is one in which the proposition expressed in that context is true. (This should have a familiar ring—it is reminiscent of (though not the same as) what supervaluationists say about supertruth.)

Now, consider a case where vagueness is more clearly at work. Suppose in this case that you have learned which car is in question. Suppose that someone says:

(8) It is expensive.

I shall assume, following my brief remarks above, that vague predicates are highly context-dependent.[26] In this case, I shall assume that 'expensive' is sensitive to, among things, a contextually determined standard of expensiveness. Let us suppose, in this case, you do not know what the standard of expensiveness at work in the context is, again because you are ignorant of some features of the context. But, suppose you know something about the car, say that it is a Rolls Royce, and that the salient individuals in the context are all philosophy professors. Then, without knowing the precise standard of expensiveness, you may well still be able to conclude that the proposition expressed is true. You may be able to conclude this, assuming that what you know about the context restricts the standards to those in which a Rolls Royce is indeed expensive.[27]

[26]I should stress that there is much in Soames' account of vagueness with which I agree. Especially, Soames (1999, 2003) emphasizes the context-dependence of vague predicates. Though I take issue with his reliance on a two-set framework, important parts of his theory can be implemented in a gap-free, one-set environment.

[27]This discussion is indebted to that of Graff (2000), which highlights the importance of ignorance of context

In this case, we may say that (8) is *determinately* true. It is true relative to any context within a small distance from the current context (where this distance is set by other features of the context). The idea is that it is determinately true, as its truth is insensitive to the very precise settings that the context may have made. Determinateness is insensitivity at the margins.

Ignorance of context does not occur only when speakers join a conversation late, nor is it something that only some participants in a conversation may experience. Cases of common ignorance of context can be built upon demonstrative reference. Suppose I make a demonstration, such that it is evident to all concerned that I succeeded in picking out unique individual, but no one knows just what that individual is. Then we are all ignorant of a feature of the context. (Artificial examples may make this vivid. We can construct a case in which we have one man whose identity is obscured by a screen, and pointing to his shadow, say 'that man'.)

One idea for defining determinateness operators, without making use of gaps, is to make use of the ignorance of context phenomena we have just seen. So, we might very tentatively say that '*determinately s*' expresses a truth just in case in any *nearby context*, '*s*' expresses a truth. In the intensional framework I have been using, this might be put as:

(9) $[\![\textit{Determinately } s]\!]_C = \{w \mid (\forall C' \text{ near } C) w \in [\![s]\!]_{C'}\}$.

As I have sketched it, we should think of a context C' as being near C if C' is compatible with what speakers know about context C. Hence, we get non-trivial *determinately* operators just when we have ignorance of context.[28]

We can detect the non-trivial aspects of determinateness by looking at speakers' assertoric behavior. Suppose we have a case in which we are ignorant of the exact contextual settings of some vague term, say again, 'expensive'. (Say we have screened-off some aspects of the comparison class, for instance.) Consider three sentences:

for questions of vagueness.

[28]The determinateness operator I have defined here has one feature that bears additional mention. It is not, in the terminology of Kaplan (1989), an operator on content. This may be seen in (9), where we need to make reference not just to $[\![s]\!]_C$, but also to $[\![s]\!]_{C'}$. The input to 'determinately' is not just the proposition expressed by '*s*' in the context of utterance, but what '*s*' would express in other contexts a well. Operators like this are sometimes held to be problematic (Kaplan called them 'monsters'.) But I am inclined to see the complexity they introduce as a way to gain some insight into the clearly difficult matter of higher-order vagueness.

(10) a. *m* is expensive.

b. *m* is not expensive.

c. *m* is not determinately expensive.

In some contexts, for some *m*, we might well find we cannot *assert* either (10a) or (10b). Even if we bivalence holds, we might simply have no grounds for asserting either. But in such a context, we might still be able to assert (10c). If we know there are some nearby contexts in which '*m* is not expensive' holds, we could assert this.[29]

I should stress that my sketch of a semantics needs to be filled in, and could be filled in by a number of different ways. My own suggestion, in terms of ignorance of context, makes '*determinately*' in a way epistemic. It is non-trivial just in those cases where we are ignorant of precisely what is expressed by an utterance in a context, but do know enough about the context to determine a range of options. Thus, it is to be understood as an aspect of speakers' knowledge of speech situations. But formally, the role ignorance of context plays is to place *constraints* on contexts which define a *nearness* relation. C' is near to C if C' meets some constraints relative to C. Constraints could be developed which are less epistemic in nature, which could yield less epistemic accounts of determinateness than the one I have briefly outlined.[30]

This hardly settles the question of how to understand determinateness. But it does show that there are resources available that do not rely on two-set views. On my suggestion, determinateness results from stability of truth across small changes of context. Indeterminateness

[29]The theory of Soames (2003) provides for a similar result, in a two-set framework. In that framework, (10a) has gap status, and the determinateness operator thus allows speakers to 'assert into the gap'. (There is some complication here, as Soames distinguishes extensions and anti-extensions from *determinate* extensions and anti-extensions. But where they diverge, we cannot report the difference.)

Soames achieves this result by introducing pairs of rules for the determinateness operator. The important rule is the negative one, which says that if '*s*' is not a necessary consequence of the rules of language and the facts, then 'Not determinately *s*' holds. In 'Mr. Smallman' cases, according to Soames, we cannot assert '*s*' or '$\neg s$', but we can then assert '$\neg Ds$' (using '*D*' for 'determinately'), and indeed, we have '$D\neg Ds$'.

Soames argues that in fact '*D*' is partial, making room for higher-order vagueness. This is so, because vague predicates will be defined not just by partial rules, but by families of partial rules which themselves may be vague. Hence, it can be indeterminate whether the negative rule for '*D*' applies in some cases. On my proposal, we would expect indeterminacy about determinacy just in case speakers are ignorant about features of context which determine the *nearness* relation.

[30]I suspect that the theory of McGee and McLaughlin (1995) could be re-cast in this form, though they talk about models satisfying constraints, not contexts. Basically, the idea I am entertaining combines elements of their view with those of Graff (2000). I'm not at all sure either would be happy with the combination.

results from lack of such stability. This can be the result of switching truth values across changes of context, even if in each context, the predicate in question exhaustively partitions the domain of (contextually salient) individuals. This does not by itself suffice to reject gaps; the very same suggestion could be made in a two-set framework. But as before, we see how the contextual gap-obviating strategy works in tandem with the *prima facie* case to argue against truth-value gaps.

We have now seen several strategies for replacing substantial truth-value gaps with *faux* gaps. Among the faux gaps are subdivisions like $\star$ of the genuine truth values, and failures of a well-defined character to express a proposition in some contexts due to partiality. My claim is that we can always explain any apparently gap-requiring phenomenon with a *faux* gap instead. We have seen how this may done in some important cases, and seen why doing so leaves room for phenomena of vagueness and determinacy. Of course, we have not examined anything like the range of phenomena required to fully substantiate this claim. Yet the strategies we have examined are extremely flexible, so I hope they do enough to make the claim appear plausible. These strategies combine with the *prima facie* case to make a strong argument against substantial truth-value gaps. From the *prima facie* case we have general theoretical reasons to see gaps as dubious. From the gap-closing strategies we have some reason to believe we can make do without them anyway. I believe this warrants, with due caution, the conclusion that there are no such things.

V Pragmatics and Semantics

The contextual gap-obviating strategy works on the border between semantics and pragmatics. Mapping this border can be quite complicated, and I shall pause briefly to comment on how the preceding arguments contribute to this task.

The Dummett-inspired arguments of Sections (II) and (III) work at the level of what we might call Gricean (or Stalnakerian) pragmatics: pragmatics that concerns itself with what speakers do in using language as an intentional activity. This stands in sharp contrast to the levels of

syntax or semantics.[31] As I said in Note (14), I wish to remain neutral as to whether syntax or semantics describe aspects of a language faculty in Chomsky's sense, but it does seem that whatever they are, they are not much like the level of Gricean pragmatics. Most importantly for us, concepts like intrinsic purpose should not be expected to apply to them.[32] We thus have an *interface* phenomenon: semantics (whatever its nature) must provide inputs to Gricean pragmatics, and so must be able to interface with pragmatics.

Such interfaces can, and do, have complex structures. The gap-closing strategies I surveyed in Section (IV) may be understood not only as ways to avoid truth-value gaps, but as illustrations of the structure of the semantics-pragmatics interface. The arguments of Sections (II) and (III) show that at the level of pragmatics, one-set gap free propositions are *required*. I granted in Section (IV.2) that there is no reason to disallow partial extensions, and corresponding characters, at the level of semantics. Assuming there are such terms, the semantics level may be able to produce two-set proposition-like objects, which are passed on to the level of pragmatics. Pragmatics must then do something with this input which, of necessity, results in a one-set proposition. One option is simply to ignore one of the sets. This amounts to the gap-closing strategy of Section (IV.1). But I suggested in Section (IV.2) that pragmatics can make much more subtle use of two-set input. The basic idea of appeal to sets of contextually salient worlds is that pragmatics might provide a way to reconstrue what starts out as two-set input as one-set output. The 'lidget' example (6) suggests that even more might be done. It suggests that pragmatics might be able to produce one-set propositions that are not exactly the same as either set of a two-set input, but derived from them in some rather complex ways.

I believe that there are a great many examples of this sort of interface phenomenon in language.[33] They may also be found in our ordinary applications of concepts. Consider law,

[31]We should include here the semantics of indexicals and other context-dependent terms. We thus might describe this as Kaplanian semantics. Of course, there have been a great many developments since the work of Kaplan (1989).

[32]Chomsky himself has been notoriously skeptical about including semantic principles pertaining to truth and reference in the language faculty (e.g. Chomsky, 1992), though by the same token, Chomsky repeatedly notes that a great deal of what is often *called* semantics is included. In contrast, Larson and Segal (1995) sketches a view of the language faculty which includes a semantics module, whose rules crucially involve reference.

[33]Let me briefly mention a couple of examples. One more of the semantics-pragmatics relation is provided by words like 'even', which have presuppositions and implicatures that do not appear in the propositions they express (e.g. Rooth, 1985, 1992). Some recent thought about the syntax-semantics interface also posits informa-

for instance. It is a safe assumption that certain legal predicates have only extensions and anti-extensions fixed by statute and precedent. We may assume the law works with some partial concepts. But in application of the law, gaps are generally closed. In criminal law, for instance, it is impossible to be neither guilty nor innocent, and there is a general principle that if one fails to be guilty, one is innocent (called the 'rule of lenity'). Thus, in application to criminal law, a gap-closing strategy like that of Section (IV.1) is applied. In constitutional law, or any area where rulings are prospective, the courts may make more refined decisions about how gaps should be closed in some situations. They thus use a strategy more like that of Section (IV.2).[34]

Let me conclude this section with one final remark about the relation between semantics and pragmatics, concerning the notion of *denial*. The arguments of Section (II) and (III) do imply that the nature of such a speech act is quite limited. They show that there cannot be a *sui generis* speech act of denial that is on par with but distinct from assertion. Any such act, I conclude (with Frege, 1918), would be simply the assertion of a negation.

This does not imply that there is nothing that could reasonably be called a speech act of denial. There is certainly the phenomenon of rejecting an assertion but not asserting the negation of its contents. This can be done in a huge range of ways: the assertion can be rejected as unfounded, as inappropriate, or as misleading (generating a false implicature). As Horn (1989) has stressed, one can even reject the way a sentence is pronounced.

I am willing to describe these sorts of cases as acts of denial, but I am doubtful that they really provide instances of a distinct speech act. They are certainly not assertions of negated sentences, but it seems to me that they are rather ordinary assertions about something else.

tion on the syntax side that is not present in semantic interpretation, for instance, the copy theory of movement (Chomsky, 1993; Fox, 2000). A similar relation is seen between acoustics and phonetics from the well-known phenomenon of categorical perception. This last example is strikingly similar to the sort of gap closing I discussed in Section IV. It is known that listeners are able to make extremely fine discriminations among sounds; yet when presented with speech sounds, they classify them into phonetic categories, and cannot discriminate among them. For instance, when presented with an evenly spaced range of sounds associated with an [æ], speakers perceive it as divided sharply into the three categories [bæ], [dæ], and [gæ], and cannot discriminate among sounds with these categories. Nonetheless, when presented with the same sounds in isolation from the vowel sound, speakers can discriminate between them, but do not perceive them as speech. (Here I follow Kenstowicz (1994). The experiments supporting these claim are attributed to Liberman. Thanks to Cheryl Zoll for pointing out this example.)

[34]Here I take issue with Tappenden (1993).

They are about the sentence asserted in a prior speech act, or some aspect of the act of asserting it. I thus follow Horn (1989) in seeing these as instances of metalinguistic negation, rather than as a distinct speech act of denial.

VI Assertion Failure

In the preceding sections, I took pains to point out that evaluation for truth is evaluation of an assertion—a move in the practice of using language—for success. Falsehood, I claimed, amounts to lack of success. But in light of context-dependence issues, it must be stressed that truth and falsehood amount to success and failure of genuine moves in the practice of using language. These are values that apply to propositions, and as I argued above, they must be understood in terms of genuine moves in the practice that could express these propositions. There is an additional category of no genuine move being made at all: failure to make an assertion. Failure to make an assertion is not the failure of not achieving the intrinsic purpose of the move. It is not making a genuine move at all. This is a kind of failure, of course. As I mentioned in Section (II), it is the failure of an agent to achieve their attendant aim in attempting to engage in the practice. More importantly for our current concerns, it is also failure to express a proposition. The result is thus a *faux* gap rather than a substantial one. Failure to express a proposition may sometimes look like the expression of a gappy proposition if we do not pay enough attention to context. But in terms of the way attempted moves in the practice are evaluated, they are entirely different.

It may be objected that the situations I require to be failure to express a proposition, failure to make a genuine move, cannot really be so. Some of the arguments of Section (IV.2), like those related to example (6), suggest that the extent of such failure may not be all that great. The more sophisticated the contextual gap-obviating devices, the less widespread assertion failure will have to be. But I do have to admit there will be some cases of it. In this section, I shall defend my view against this objection, and consider more generally the nature of the phenomenon of expression failure.

To fix an example, let us suppose we are in a context in which nothing can be done to

obviate the question of whether or not Mr. Smallman is a smidget. I am committed to holding that in such a context, an assertion of 'Mr. Smallman is a smidget' fails to express a proposition. Soames (1999) advances an argument against my position. I believe it is mistaken, and seeing what is wrong with it will help bolster the intuitive appeal of my view.

First, Soames asks us to compare two sentences.[35] Consider again Ms. Tall, who is five feet, and so ruled not a smidget by the rules. Compare:

(11) a. Mr Smallman is a smidget.

b. Ms. Tall is a smidget.

Soames proposes that an assertion of (11b) expresses a proposition. If it does, he notes, it must somehow take into account the world in which Ms. Tall's height is just enough different to make her the same height as Mr. Smallman. Hence, it does for this circumstance whatever an assertion of (11a) needs to do for Mr. Smallman as he actually is. Soames concludes that as there is a proposition expressed by (11b), there must be one expressed by (11a) as well.

This argument goes wrong with its first premise, that (11b) expresses a proposition. This is an equivocation on contexts. There are certainly contexts in which an utterance of (11b) could express a proposition, and the ones that naturally come to mind are so. If we just add to the original context in which 'smidget' was introduced the fact that Ms. Tall is in group (B), we get one. However, this does not imply that in a context in which Mr. Smallman or other individuals within the gap are contextually salient, an assertion of (11b) expresses a proposition. The arguments I presented above show that in these contexts (supposing we have no other way to contextually obviate the gap), an assertion of (11b) will no more express a proposition than will an assertion of (11a). The best Soames' argument does is to further articulate why this is so.

It might be replied that it is just intuitively obvious that an utterance of (11b) expresses a proposition in either sort of context. Why? I think the basic reason might be that it appears the speaker successfully conveys some information about Ms. Tall's height. It is worth pausing to note how this relates to the idea of expressing or failing to express a proposition.

[35]I have modified Soames' phrasing to agree with that of example (5).

It is fairly obvious that attempted speech acts can have some of their intended effects, their *perlocutionary effects* (in the terminology of Austin (1975)), even if they fail to achieve their illocutionary purposes, or fail to be genuine speech acts at all. You might intend to stop me from walking into the path of an oncoming car, by giving me a warning. If your attempt to warn me fails, because fear stops you from making any more than an odd croaking noise, I might still on the basis of your doing so stop in my tracks.

It is only a little less easy to see that in some cases, one can convey information without succeeding in making a genuine assertion. You might convey the information that you have a sore throat by making the same odd croaking noise. You might even be trying to assert that you have a soar throat, but be frustrated by the very condition.

To take another example, let us suppose, as I think is relatively common, that failed uses of demonstratives lead to expression failure. Suppose I have nothing to drink with me, and someone walks up to me and says:

(12) That looks very thirst-quenching. I would love to have some of it.

The speaker fails to express a proposition (or two). But they clearly convey the information that they are thirsty. The same information could be conveyed by the speaker walking up to an empty water-cooler and looking sad, though. No proposition is needed.

With this in mind, let us look again at the failed assertion of (11b). It does convey information about Ms. Tall, but that is not adequate grounds to hold that a genuine assertion has been made. Though we learn something about Ms. Tall, we are not able to contextually fix what property is being predicated of her. Hence, the attempt at assertion fails.

To fail to express a proposition is not to fail to do anything at all. In many cases, it is to do something: something which can have all kinds of consequences and convey all kinds of information. But to express a proposition is not just to do something, or something which makes information available. Practically any act can do that. To express a proposition is to do something in particular. The account offered in Section (II) helps to explain what. It is to perform a purposive act with a particular kind of success condition.

Why prefer this act to any old presentation of information? This is too large an issue to

deal with thoroughly, but the success conditions for assertion give some form to the idea of describing the world as being some *particular* way. Merely making some information available is a much looser standard. (12) makes information available, but in a way that fails to describe the world in any one particular way, as it fails to fix the thing of which properties are being predicated.

Likewise, suppose I say in a circumstance empty of lime trees:

(13) THAT lime tree is yellow.

I make available some information: that I somehow think there is a lime tree, that I somehow apply yellowness. If you pay attention to the stress indicated by the capital letters, you will also get the information that I somehow think it surprising for a lime tree to be yellow. But I do all of this without describing any particular thing as being any particular way. I do all of it without expressing a proposition. To exaggerate the situation, suppose I stop speaking part way through, so I only say:

(14) THAT lime tree is . . .

Certainly no proposition is expressed here. I make much less information available than I did with (13), but the information that I find it surprising for a lime tree to be something is still accessible. Likewise, in certain contexts, (11b) can fail to express a proposition by failing to fix what property is being predicted of Ms. Tall, yet still convey information.

Finally, let me turn to a related issue: Belief. Just as it might have seemed plausible that an utterance of (11b) expresses a proposition in any context, it might be a attractive to hold that anyone misinformed about Mr. Smallman's height could believe that Mr. Smallman is a smidget. As Soames notes, insofar as belief is an attitude towards a proposition, it appears there must be a proposition to be believed.[36]

We may reply to this argument the same way we replied to the previous one. Failing to be in a belief state, in the specific sense of failing to be in the belief relation to a proposition, is

[36]There is some debate over whether or not the objects of attitudes and the contents of assertions should be *exactly* the same things or not. However, at the course-grained level at which we are examining propositions, we may safely ignore this worry.

not to be in no state at all. It is often to be in a state that has some information value. This is a familiar idea in the case of singular thoughts, such as those reported by demonstratives. In reporting on the mental state of someone claiming (13), we cannot quite say they believe *that THAT lime tree is yellow*, rather we have to say that they seem to believe, or have the illusion of belief, that there is a lime tree present, and it (in contrast to others), is yellow. This is not a genuine belief state, but it is a state such that we can conclude a great deal about the subject. They think (mistakenly) that there is an object present, that it is yellow, and so on.[37]

Likewise, I must say that the person who says 'Mr. Smallman is a smidget' does not have a genuine belief. They are in a mental state that provides us with a great deal of information, including information pertaining to the height of Mr. Smallman, but that is not enough to conclude that there is a genuine belief of a proposition reported by the claim.

VII Conclusion

I have argued that there are no substantial truth-value gaps. The argument works at two levels. At a high level of abstraction, I offered the Dummettian challenge, and then argued that the challenge could not be met by pro-gaps views. At a somewhat less high level of abstraction, I argued that we can explain away apparently gap-requiring examples by some alternative strategies. I conclude that substantial truth-value gaps are poorly motivated, in conflict with some attractive general principles, and useless. There are none.

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[37]The literature on this idea is quite large, much larger than that for assertion. Perhaps the classic source for the idea of illusion of belief is Evans (1982), developed by McDowell (1982, 1986). Some related ideas are discussed from a more Kaplan-inspired point of view by Braun (1993).

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