

Draft 14/02/06. Very rough. Strictly not for circulation or citation. (Polite) comments requested.

Cognitive Content and Propositional Attitude Attributions

1. Background

Tyler Burge (Burge (1979)) has developed a very influential line of anti-individualistic thought. He argued that the cognitive content of a person's concepts depends in part on their socio-linguistic environment. The argument of that paper centered around the example of a subject, now often called 'Alf', who does not know that by definition 'arthritis' applies only to conditions of the joints. We are to imagine that Alf has many typical, mundane beliefs about arthritis: he believes that arthritis is a painful condition, that he himself has suffered from arthritis for years, that his arthritis in his wrist and fingers is worse than his arthritis in his ankles, and so on. One day he wakes up with a new pain and fears that his arthritis has spread to his thigh. On a twin earth, the term 'arthritis' is used more liberally than it is here, and applies to various rheumatoid conditions of bones and other sorts of tissue, and indeed is true of the condition that Alf has in his thigh. Twin Alf, being an inhabitant of this twin earth, has no concept of arthritis and so does not believe that his arthritis has spread to his thigh.

Burge would argue that (1) is true and (2) false:

- (1) Alf thinks that he has developed arthritis in his thigh
- (2) Twin Alf thinks that he has developed arthritis in his thigh

He would argue, more particularly, that (1) is true, and (2) false, on *de dicto* readings, where the content sentences specify the cognitive content of the attributed attitudes. Thus the cognitive contents of Alf's and Twin Alf's 'arthritis' concepts differ. The difference is due to a difference between Earth and twin Earth experts' opinion as to the meaning of the word-form 'arthritis' in their respective languages. In particular, the opinions of Earth and twin Earth experts fix different extension conditions for the Earth and Twin Earth terms 'arthritis'. This means that Alf's 'arthritis' concept is true of arthritis and arthritis only, while Twin Alf's 'arthritis' concept has a different extension condition.

And a difference of extension conditions entails a difference of cognitive content.

Burge's articulation of the argument actually appears to involve commitment to a view that is

significantly stronger than is required to establish the conclusion. The view is that, in typical cases, the words that a speaker uses are words of public language. A word of public language has a public meaning which is available to its different users. Speakers who are minimally competent with a word get to use the word with this public meaning. So, for example, if both Alf and a consultant rheumatologist say 'Mr. Jones has arthritis', the words they utter express the same meaning — even though the expert believes that by definition 'arthritis' applies only to swelling of the joints, while Alf does not believe this. Moreover, what is true of meaning is true of the content of propositional attitudes. When Alf and the doctor say 'Mr. Jones has arthritis' they express beliefs with the same cognitive content: what they both believe is that Mr. Jones has arthritis.

Roughly following the terminology of Segal (2000) (who was roughly following the terminology of Kaplan 1990 and Mercier 1994) we can label the two theses 'weak consumerism' and 'strong consumerism'. The idea behind 'consumerism' is that a speaker is a consumer of public words with public contents: it is not to the speaker to produce his own meaning or content. I stipulatively use the terms as follows.

Weak consumerism is the (conjunctive) thesis that:

(a) in typical cases, the extension conditions of the concept that a subject expresses by a term are partly determined by expert opinion and (b) the cognitive content of a concept determines its extension conditions.

Strong consumerism is the thesis that:

in typical cases, each term of public language has a unique cognitive content associated with it and when a speaker uses the term, that is the cognitive content they express by it.

The two theses could come apart. It would be *prima facie* perfectly reasonable to endorse weak consumerism while rejecting strong consumerism. One might hold, for example, that Alf does not associate the very same cognitive content with 'arthritis' as does the expert, thus rejecting strong consumerism. But one might still hold that (1) is true and (2) is false on *de dicto* readings, because Alf has and Twin Alf lacks an 'arthritis' concept that extends over arthritis and arthritis only.

The idea of adopting weak consumerism while rejecting strong consumerism receives some support from a natural response to the famous puzzle cases of Kripke (1979), of which the following is typical.

Ignacy Jan Paderweski (1860-1941, Polish) was both a great pianist and a renowned statesman. One can easily imagine a subject, call him 'Barney', who has heard of Paderweski the statesman and of Paderweski the musician, but who does not believe that they are one and the same person. Barney happens to believe that politicians typically lack musical talent. He is thus disposed sincerely to assent to both (3) and (4):

(3) Paderweski had musical talent

(4) Paderweski did not have musical talent.

Thus (5) and (6) both appear to be true:

(5) Barney believes that Paderewski had musical talent

(6) Barney believes that Paderewski did not have musical talent

One might sensibly conclude that the classical, Fregean account of *de dicto* propositional attitude attribution has to be given up. On the classical account, (5) and (6) entail that Barney believes contradictory Fregean thoughts. But, since Barney is being completely rational, this does not depict the situation correctly. One might, however, want to retain a fundamental aspect of Frege's philosophy of mind. In particular, one might want to maintain that Barney's dispositions in relation to (3) and (4) show that he associates different cognitive contents with his different uses of the name 'Paderweski'. And that means that strong consumerism is false. There is at most one public-language term 'Paderweski' (naming the musician and statesman), with at most one public content. But Barney uses different occurrences of the term to express different cognitive contents.

Now imagine a twin Earth with a twin Barney and a twin Paderweski. Twin Barney has beliefs about twin Paderewski that correspond to Barney's belief about our Paderewski. But of course Twin Barney has no beliefs about Paderewski. And there is no interpretation under which (7) is true:

(7) Both Barney and Twin Barney believe that Paderewski had musical talent.

And so, one might think, Barney's and Twin Barney's 'Paderweski' beliefs do not have identical cognitive contents. So, one might conclude, extension is fixed by social facts, and cognitive content determines extension.

I will return later to the question of how we are to understand (5) and (6). I return now to Alf and arthritis. In Segal (2000) I articulated individualist responses to both strong and weak consumerism in relation to Alf. Allow me briefly to summarize.

The argument against strong consumerism, originally formulated in Loar (1987), works simply by turning the arthritis case into a Paderewski case. Suppose that Alf goes to France and there becomes competent with the term 'arthrite'. He fails to realize that 'arthrite' translates 'arthritis'. He becomes disposed sincerely to assent to (8) and dissent from (9) (which is a normal translation of (8) into French):

(8) I have arthritis in my thigh

(9) J'ai de l'arthrite a la cuisse

These linguistic dispositions show us that Alf has two different concepts with different cognitive contents that he expresses by the two terms 'arthritis' and 'arthrititis'. But their public contents are the same. So strong consumerism is false. The argument is defended in depth and detail in Segal (2000), and, in my opinion, can be made almost as irrefragable as an informal argument can get in philosophy.

My argument against weak consumerism (which is not almost as irrefragable as an informal argument can get in philosophy) went roughly as follows. When Alf says 'arthrititis' he does not mean *arthrititis*. After all, that's what he means when he says 'arthritis'. Given this, there is no good reason to suppose that the concept he expresses by 'arthrititis' extends over arthritis and arthritis alone. And, given that, there is no compelling reason to suppose that Alf and Twin Alf's concepts have different cognitive contents. Moreover, given that the concepts play identical roles in the two Alfs' cognitive economies, there are good grounds for supposing that their concepts have the same cognitive content after all.

What I shall do now is consider a different, though closely related, argument of Burge's that centre's around a different but related type of example. The motivations for this consideration are: to show that the individualist responses to Alf are robust, to develop further the response to weak consumerism and to explore some interesting issues that come to the fore in connection with the latter argument and example. After that, I will deal briefly with an objection to my approach.

2 *Doubting definitions*

Burge (Burge 1986) asks us to consider the case of a man, whom Burge calls 'A' and whom I shall call 'Arthur', who has an iconoclastic theory about sofas. Arthur is competent in the use of the term 'sofa', having acquired it in a normal way. He is aware of what are considered to be standard truisms about sofas, such as that they are designed to be sat upon. 'At some point, however, [Arthur] doubts the truisms and hypothesizes that sofas function not as furnishings to be sat upon, but as works of art or religious artifacts. He believes that the usual remarks about the function of sofas conceal, or represent a delusion about, an entirely different practice. [Arthur] admits that some sofas have been sat upon, but thinks that most sofas would collapse under any considerable weight and denies that sitting is what sofas are preeminently *for*.' (707).

We now imagine that a twin of Arthur's, Twin Arthur, inhabits a twin Earth where the objects that he standardly calls 'sofas' in fact are works of art or religious artifacts and are not made for sitting on. Most of them would collapse under any considerable weight. What Twin Arthur and his fellows call 'sofas' are thus not sofas. Burge suggests that we call them 'safos'. According to Burge, while Arthur has numerous propositional attitudes involving the concept of a sofa (Burge 1985 p. 708) — such as, that sofas are works or art or religious artifacts - Twin Arthur does not. Rather, Twin Arthur's corresponding attitudes involve the concept of a safo. So, the contents of the subjects' concepts depend in part on the natures of the artifact kinds in their local environment.

One obvious difference between this case and the 'arthrititis' case is that in this one it is not just expert

opinion that varies across the twins' environments, but also on the nature of the artifact kinds involved. This will not be hugely important in what follows. But for book-keeping purposes it requires another formulation of weak consumerism. I will call it 'weak consumerism^A', 'A' for 'artifact':

Weak consumerism^A is the (conjunctive) thesis that a. in typical cases, the extension conditions of the concept that a subject expresses by an artifact term are partly determined by expert opinion and by the nature of the artifacts to which the term is actually applied b. the cognitive content of a concept determines its extension conditions.

A second major difference between the 'sofa' and the 'arthritis' case — a difference that Burge focuses on — is that Arthur is aware of the relevant definition where Alf is not. While Alf just doesn't know that, by definition, 'arthritis' applies only to swellings of the joints, Arthur is aware that, at least according to some people, 'sofa' is supposed to apply, by definition, only to objects made for sitting upon. But Arthur takes it that what are put forward as definitional remarks — such as 'sofas are made for sitting on' — are incorrect. These remarks, he thinks, 'conceal, or represent delusions about, a completely different practice'.

3. Paderewski Variations

I now deploy the Loarish argument against strong consumerism, in relation to Arthur. Let us indulge ourselves in another story. Arthur lives in London, England. He shares a flat with young man, Ban, who comes from a country in the far east called 'Vantong'. Arthur and Ban become friends and spend much time in discussion of a multitude of topics. Arthur confides his views about sofas to Ban. Ban is at first skeptical. But he gradually becomes more open-minded in respect of Arthur's iconoclastic views. Ban's position is that he is quite certain that in his part of the world, sofas are really sofas. But he gradually becomes more and more sympathetic to Arthur's views about sofas in the western world, until he is eventually convinced by them. However, Ban's reasons for thinking that in Vantong sofas really are sofas, are very convincing. His uncle is in the furniture business, he has visited a sofa factory, and so on. Arthur himself is at first skeptical about Ban's claims. But after a while Ban convinces him. Thus they both arrive at the view that while the vast majority of sofas in the western world are religious artifacts or works of art, all the sofas in Vantong are genuine sofas.

Let us suppose that Arthur becomes reasonably competent in Vantong. The Vantong word for sofa, an exact translation of the English 'sofa', is 'navid'. Arthur and Ban are agreed 'navid' by definition applies only to items of furniture made for sitting upon and that anything that is not an item of furniture made for sitting on is automatically not a navid. They are both disposed sincerely to assent to the Vantong (10) which is an exact translation of (11) in normal English:

(10) Navid yan-tse han saksak

(11) All sofas are made for sitting on

However they are of course happy to apply ‘sofa’ to works of art or religious artifacts. And they are both disposed sincerely to dissent from (11).

If we were overhasty in our deployment of standard heuristics for attributing beliefs, we would conclude on the basis of their dispositions to assent to (10) that our protagonists believe that all sofas are made for sitting on. And we would conclude from their disposition to dissent from (11) that they believe that it is not the case that all sofas are made for sitting on. We might then conclude that they are completely insane. A more charitable conclusion would be that they associate two different concepts, with two different cognitive contents, with the terms ‘sofa’ and ‘navid’. Hence strong consumerism is false.

Moreover it looks as though, if there is such thing as *the* concept of a sofa, then it is the one they express by ‘navid’ rather than the one they express by ‘sofa’. In that case, when Arthur says ‘sofa’ he does not express the concept of a sofa. And if that is right, then it is not true that when Arthur uses ‘sofa’, he expresses propositional attitudes involving the concept of a sofa. Let us look into the matter in more detail.

4 *De re and de dicto*

What exactly does Arthur believe? Let us return to the time before he met Ban and

focus on the attitude attribution (12):

(12) Arthur believes that sofas are works of art or religious artifacts.

Two propositions are crucial to Burge’s argument for weak consumerism^A. The first is some utterances of (12) would be true on a *de dicto* reading, and the second is that, in such utterances, the word ‘sofa’ extends over sofas and sofas alone. Further reflection casts doubt on these propositions. Utterances of (12) can be true on a *de re* reading. But a true *de dicto* reading is only available if ‘sofa’ is being used in an idiosyncratic way. So let us further reflect.

When we are given the story of iconoclastic Arthur, we find it easy enough to accept (12). But that is on a *de re* reading like (13) or (14), that we also find unproblematic:

(13) Arthur believes that long, upholstered seats are works of art or religious artifacts.

(14) Arthur believes that sofas are not sofas.

I think that there is a significant difference here between this case and the case of Alf. It is not natural to give (1) (‘Alf thinks that he has developed arthritis in his thigh’) a *de re* interpretation. We are not thinking that Alf thinks of arthritis that he has developed it in his thigh. Part of the reason for this contrast is that it is very plausible that Arthur has various concepts of sofas that verify *de re* (de sofa) attributions. For example he could think of sofas as *instances of the same sort of artifact as that with that*

demonstrating a specific sofa. By contrast, Alf couldn't think of arthritis as *the same sort of disease as that*, with *that* demonstrating the swelling of some joint. One reason for this is that 'disease' doesn't fix a principle of individuation that will collect the right extension: if the description fixes an extension at all, then it will be the disease that causes the arthritis — Paget's disease, say, (which can cause both arthritis and symptoms in the thigh) - rather than arthritis itself, which is a symptom of the disease. Relatedly, it would be hard to construct a plausible example of a subject who had an iconoclastic theory according to which arthritis might affect the thigh. What would you make of a subject who insisted that 'in spite of what the medical dictionaries say, arthritis is really a condition that frequently occurs outside the joints'?

Arthur of course would not express any of his beliefs using the embedded clauses in (13) and (14). But he might well express himself by saying (15):

(15) Sofas are works of art or religious artifacts

Does this mean that an utterance of (12) true could be true *de dicto*? That depends on what Arthur means by 'sofa'. Obviously, if, when he says 'sofa', he doesn't mean *sofa*, then his saying (15) doesn't support a true *de dicto* reading of (12). So what does he mean by 'sofa'?

Here's something that might help us find out. Suppose we were to ask Arthur whether a long, upholstered seat - an item of furniture that was definitely made for sitting on, and had no other purpose - would be a sofa.

It would not be surprising if he were to say 'no'. It is quite possible that what he believes entails (16):

(16) [Necessarily, all sofas are works of art] or [necessarily, all sofas are religious artifacts]

In this case, he thinks of sofas as objects created for a specific purpose and he thinks of this purpose as essential to the items being what they are. It is just that he doesn't know which of two candidate purposes actually plays the individuating role.

So he might well say 'no' in answer to our question. The items might look a lot like sofas. Perhaps the original inspiration for them came from sofas. But they aren't really sofas, since they are simply practical pieces of furniture and not works of art or religious artifacts.

It is pretty clear that if that is how Arthur uses the term 'sofa', then he doesn't mean *sofa* by 'sofa'. And if that is the case, then his saying (15) doesn't support a true *de dicto* reading of (12), with 'sofa' used in its normal sense.

Notice also that when we are talking about Arthur we can use the term 'sofa' in the same non-standard way, to match Arthur's own use. We too can use it so that by definition it fails to apply to long, upholstered seats. I just did so in the last sentence of the paragraph before last. I will use 'sofa_d' for 'sofa' interpreted in that unusual manner, so that it entails (16) ('d' for 'disjunctive').

So, then, if we are inclined to accept a *de dicto* reading of (12), it may well not be one under which ‘sofa’ means *sofa*. Rather, it might be interpreted as (17):

(17) Arthur believes that sofa_ds are works of art or religious artifacts

Suppose, on the other hand he says ‘yes, a long, upholstered seat would be a sofa — though of a very unusual sort’. Then what concept is he expressing by ‘sofa’? I’d like to invite you to engage in a thought experiment that might help us answer that question. Let us put ourselves in Arthur’s shoes. Please join me in the following simulation.

For centuries, many aspects of human society have been run by the secret religious order of Sofaism. Although the order is secret, a large contingent of the more powerful individuals in western society are members. Secrecy is of the utmost importance to Sofaists, partly because they do not wish to become involved in debate. In particular, they do not want to enter into intellectual discussions with scientists or philosophers, who might undermine their religious beliefs and shake the faith of many of the less committed members of the order.

Perfectly in line with Arthur’s suspicions, most sofas are in fact the creations of the secret order of Sofaists. These sofas are religious artifacts, objects of worship, manufactured according to strict rules, under the aegis of anointed sofa masters.

Many Sofaists like to keep such sofas in their houses, as symbols of their faith.

In spite of the best efforts of the leaders of the order, a small but significant number of members have lost their faith. They have formed their own secret society, which functions as a self-help group. They have all agreed not to reveal themselves to society at large, for they wish to avoid the large-scale conflict with religious Sofaists that would inevitably ensue. There is a strong artistic movement amongst the lapsed Sofaists. And some of the sofas that you have seen in show rooms and certain other venues are in fact works of art created by lapsed Sofaists.

The vast majority of sofas are creations of Sofaists and lapsed Sofaists: they are religious artifacts or works of art. And, as Arthur suspects, most of them would not be suitable for sitting on, but would break under the weight of the average human. Nevertheless, some sofas are what we always thought they were. They were made by ordinary people, who know nothing of the secret order. They are mere items of furniture: long, upholstered seats, quite suitable for bearing the weight of one or more reposeing humans.

Now please try hard to suppose that the story I have been telling you is true. Picture a secret place of worship, perhaps disguised as an exclusive health club in the Alps. Inside the grand building is a great hall. And within this great hall, many fine sofas are available for worship. They are the most delicate and fragile of sofas, and worshippers must take care not place any weight upon them, lest they break.

If you are happy to imagine what I have just asked you to, then you have interpreted my word 'sofa' in a liberal sense, so that it might truly apply to an object no purpose of which has anything to do with sitting. You have interpreted it so that it includes non-sofas in its (modal) extension. This is an unusual sense, since the normal English sense relates 'sofa' to sitting by definition. In normal English (in the idiolects of most of those who call themselves 'English speakers', including myself) 'some sofas are not meant for sitting on' is analytically false. I will use 'sofa_L' for 'sofa' in the unusual, liberal sense. In the world we have been imagining, the world according to Arthur, most sofas_L are not sofas at all.

With all this in place, we can now perhaps work towards another true *de dicto* reading of (12). We have (18):

(18) We supposed, and Arthur believes, that most sofas are religious artifacts or works of art.

And, indeed, we even have (19):

(19) We supposed, and Arthur believes, that most sofas are not sofas, but are religious artifacts or works of art.

There are unproblematic *de re* readings of (18) and (19) under which they are true. But we can also get true *de dicto* readings, if we interpret them as (18') and (19') respectively:

(18') We supposed, and Arthur believes, that most sofa_Ls are religious artifacts or works of art.

(19') We supposed, and Arthur believes, that most sofa_Ls are not sofas, but are religious artifacts or works of art.

And if that's right, then we can get the analogous true *de dicto* reading of (12).

I think that the concept expressed by 'sofa_L' comes under the heading of what Burge terms a "reduced" notion of a sofa, like one an anthropologist might employ on coming into a society that uses a term for objects that he or she can recognize. But whose use he or she has not yet determined' (711). Burge briefly considers a couple of ways of elaborating on the nature of the 'reduced' concept. On one elaboration, the reduced notion is 'tied to perceptual aspects of sofas'. The other proposal is that the reduced notion is "*thing of a kind relevant to understanding what these things are* (where some sofas are indicated)". Burge points out that the first proposal might well not capture Arthur's notion, and that the second at best confuses reference-fixing with a meaning-given description.

I concur that *sofa_L* is perhaps not a perceptual notion. Maybe a sofa_L has to be an artifact. Or maybe it has to have at least some kind of unobservable unifying essence. There are a variety of different types of notion that 'sofa_L' might express. You can ask yourself which one you deployed during our little

imaginative game. I concur also that the description that Burge mentions is no good. But there is no reason why an individualist account of the reduced notion should be descriptive. Given certain ways of fleshing out Arthur's character, there are 'reduced' notions that would capture his way of thinking.

What then of weak consumerism^A? According to weak consumerism^A, when Arthur says 'sofa' he expresses a concept the extension of which is fixed by the local experts and the nature of the local items they call 'sofas', so his 'sofa' concept differs in extension from Twin Arthur's. Once it is conceded that when Arthur says 'sofa' he doesn't mean *sofa*, there is very little to be said for this view. For one thing, Arthur does not defer when it comes to the extension of his word. His behaviour is different in this respect from Alf's. When Alf's doctor tells him that by definition arthritis afflicts only the joints, Alf immediately accepts correction. Arthur, according to the way Burge describes him, has been confronted by expert opinion about what it is for something to be a sofa. But Arthur disagreed, taking the view that the standard 'conceal, or represent a delusion about, an entirely different practice.'

We have looked at two ways of fleshing out the Arthur story, and we have seen that on neither of those, does his 'sofa' concept extend over sofas and sofas alone. *Sofa_d*, is constrained by its very nature not to extend over sofas at all. (*Sofa_ds*, recall, aren't really sofas, since they are simply practical pieces of furniture and not works of art or religious artifacts). And *sofa_l*, although it is true of sofas, is true of non-sofas as well. (Recall the Alpine temple, with its most delicate and fragile of *sofa_ls*.) And we would get the same result on any fleshing out of the Arthur story. If his linguistic and other dispositions are coherent enough to be interpretable at all, then there will be an account of his concept under which it includes non-sofas in its modal extension.

We should, then, abstract away from the differences between Arthur's and Twin Arthur's environments and see their concepts as having the same cognitive content.

5. Attitude Attributions, Neologisms and Generalizations

Sawyer (this volume) objects to my strategy of introducing neologisms to express idiosyncratic concepts on the grounds that it 'threatens both the ordinary practice of ascribing psychological states by mean of standard terms and a scientific psychology that appeals to concepts expressed by standard terms'. There is a prima facie threat to ordinary practice and scientific psychology that arises in relation to neologisms. But the prima facie threat arises because there is a lot of conceptual variation across individuals, not because one might usefully introduce neologisms to help describe what is going on. I will discuss ordinary practice first, then say a word about scientific psychology.

The prima facie threat arises because there are more individual concepts than there are public words. This is apparent already in the Paderewski case. Rather than revisiting that, let us switch to a new example. Sonia is a native of England. She is averagely competent with the term 'blackbird', as it is

typically used in England. She is even able, on occasion, to recognize blackbirds. Sonia spends a few months visiting Australia. There, she sees some birds with brown plumage and brown beaks, which the locals call 'blackbirds'. In fact, these are females of the same species as English blackbirds, *turdus merula*. But Sonia does not know this, and, reasonably enough, she assumes that Australian blackbirds belong to a different family from English ones. When Sonia is in Australia, addressing someone whom she takes to be a speaker of Australian English, she is disposed sincerely to assent to (20):

(20) Blackbirds typically have brown feathers

But when she is in England, addressing someone whom she takes to a speaker of English English she is disposed to sincerely to dissent from it.

Ordinary practice then legitimates both (21) and (22):

(21) Sonia believes that blackbirds typically have brown feathers

(22) Sonia believes that blackbirds typically do not have brown feathers

(20) and (21) can both be true *de dicto*. Hence the prima facie threat to ordinary practice: it appears to commit us to attributing contradictory thoughts to Sonia, when she doesn't have any. The introduction of neologisms helps to dispel this appearance. What motivates the introduction of neologisms has nothing to do with individualism, nor some manic desire to generalize over possible but non-actual twins. Rather, it is a Fregean approach to propositional attitudes. It is the recognition that (i) when a subject associates different attitudes with two expressions, as Sonia does with her two "blackbird"s, she expresses different cognitive contents by them and (ii) propositional attitude attributions attribute cognitive contents. Neologisms help to show how the Fregean approach is consistent with Paderewski cases. Sonia has two words that share the orthographic form 'blackbird' that I can represent as "blackbird_A" (for her Australian version) and "blackbirds_E" (for her English one). Having introduced these neologisms, I can now write (21') and (22'):

(21') Sonia believes that blackbirds_A typically have brown feathers

(22') Sonia believes that blackbirds_E typically do not have brown feathers

(21') and (22') can serve two purposes. First, they can serve as partial depictions of the logical forms of utterances of (21) and (22), which help show us how they could be true, *de dicto*. Second, they could be used as the orthographic forms of propositional attitude attributions that make explicit those logical forms.

Sawyer observes correctly that according to if my view is right, then conceptual variation is rife. She is appears to worry that then the 'introduction of neologisms would be rife'. It would be a worry if my view entailed that usually when speakers offer propositional attitude reports using what appear to be familiar terms, they should be interpreted as using neologisms — so, if they were to express themselves clearly they should really be using novel orthographic or phonological forms. That would be implausibly revisionary. But my view does not entail that at all. Neologisms are only necessary when small conceptual variations matter. Such cases are very rare.

Moreover it does seem to me that when speakers are confronted with Paderewski cases, they often do endeavour to introduce neologisms. A speaker confronted with the Sonia case and asked: 'does she or does she not believe that blackbirds have brown feathers?' might well feel some discomfort. (It's the same discomfort you might feel when I tell you that I live in London, England and not London, Ontario. Do I live in London, or do I not? Answer me!) The speaker might well react by trying to do the same sort of thing that I did by introducing subscripts. They might try saying 'blackbirds' with an Australian accent when saying (21). Or they might put quotation marks round it (perhaps by wagging four of their fingers). Or they might say: 'she believes that Australian blackbirds typically have brown feathers, but that English blackbirds do not'.

As I said, though, cases where small conceptual variations matter are rare. Usually they can be ignored, even in *de dicto* attributions. Here is a very rough summary of what I take to be the best account of the semantics of attitude attributions in natural language. The core of the idea is to be found Davidson (1969). In a standard propositional attribution, the reporter uses a sentence of their own language, with its own particular meaning in the context of utterance, to talk of a content that is attributed to the reportee. In the case of belief, the idea might be roughly formulated as in (P) (adapted from Segal 2000 p. 81):

(P) A report of the form "a believes that s" as uttered by b, in conversational context c, is true iff the content of s in b's mouth, in c, is similar enough, by the standards of c, to that of some belief belief of a's.

The similarity clause affords plenty of flexibility. All kinds of pragmatic factors enter into determining what counts as "similar enough" in a given context. They determine whether the attribution is *de re* or *de dicto*. And, if the attribution is *de dicto*, they determine whether the similarity should be at the level of Kaplanian character (Kaplan 1989) or something more like Fregean sense. (23) and (24) are examples where the former is at issue:

(23) Every boy wants his mother to love him.

(24) Chief Vitalstatistix was forever afraid that the sky would fall on his head tomorrow.

Moreover, where an attribution is *de dicto* and something more like sense than character is at issues, required standards of similarity may still vary along a dimension of strictness. Sometimes standards are very strict. The reportee has to have a belief the cognitive content of which is really very similar to that of the content sentence, for the attribution to be true. But often the standards are more relaxed. The

reportee just has to have belief the cognitive content of which is reasonably similar to that which the speaker expresses by the content sentence. Suppose, for example, that Sonia has observed blackbird chicks in Australia, and on that basis has formed the view that blackbird_A chicks are mottled, with a rufous hue. Then (25) may be true, *de dicto*:

(25) Sonia and you and I all believe that blackbird chicks are mottled, with a rufous hue

In this case, we abstract away from the variation in cognitive content between Sonia's concept *blackbird_A* and your and my 'blackbird' concepts, to formulate a true *de dicto* generalization.

Notice that in Sonia's case, like in the Paderewski case, the protagonist has neither a mistaken nor an incomplete understanding of the focal concept. It might be slightly unusual for someone to think that blackbirds are brown. But it does not involve any mistakes about or ignorance of a truth of meaning. Thus the term 'blackbird' is used in (25) in a normal sense. This contrasts with, for example, the use of 'sofa' in a *de dicto* version of (12). In cases like that, when we are using words in aberrant senses, the motivation for deploying neologisms is greater than in Paderewski cases.

I conclude now with a brief word about scientific psychology. Sawyer points out that according to my view, we need to deploy neologisms when we need to be precise and explicit and that I also hold that psychology is concerned with concepts that "are common across the whole species or some significant population within it". She objects that imprecision "ought not to be tolerated within scientific practice" and continues: "If conceptual variation is rife, there will be few concepts that are common across the whole species or across some significant population within it. Consequently, the concepts available for scientific psychology to study would, on the face of it, be too few for the practice to be scientifically viable".

I disagree that imprecision ought not to be tolerated within scientific practice. The sort of imprecision in question is simply a matter of selecting the right level of grain for the type of generalization sought. For example, astronomers sometimes regard the planets as spherical. This sort of imprecision is necessary, harmless (when care is taken) and rife in science. Psychology is no different.

Those (many) areas of scientific psychology that deal in concepts and cognitive content standardly use ordinary-language *de dicto* propositional attitude attributions to generalize over large populations. These are best interpreted on the model of (P) (where the 'conversational context' normally is academia).

BIBLIOGRAPHY

Bello, A., and Cuervo, R., (1874) *Gramática de la Lengua Castelliana*

Burge, T., (1979) "Individualism and the Mental" in P. French, T. Uehling and H Wettstein eds, *Midwest Studies in Philosophy no. 4*, Minneapolis, University of Minnesota Press: 73-121.

Burge, T., (1986) "Intellectual Norms and the Foundations of Mind", *The Journal of Philosophy* LXXXIII, 12: 679-720.

Davidson, D., (1969) "On Saying That", in D. Davison and J. Hintikka eds. *Words and Objections Essays on the Work of W. v. Quine*, Dordrecht: Reidel: 158-174

Gosciny, R., and Uderzo, A., (1961) *Asterix le Gaulois*, Paris: Hachette.

Kaplan., D., (1989) "Demonstratives", in Almog, J., Perry J., and Wettstein, H., eds. *Themes from Kaplan* Oxford; Oxford University Press. 481-563.

Kaplan, D., (1990) Words, *Proceedings of the Aristotelian Society* supp. vol. 64 93-119.

Keil., F., (1989) *Concepts, Kinds and Cognitive Development* Cambridge MA: MIT Press.

Kripke, S., (1979) "A Puzzle about Belief" in , Margalit, A., ed. *Meaning and Use* Dordrecht: Reidel. 239 283

Larson, R., and Segal G., (1995) *Knowledge of Meaning*, Cambridge: The MIT Press.

Laurence, S., and Margolis, E., "Concepts in Cognitive Science", in E. Margolis & S. Laurence (eds.) *Concepts: Core Readings*, pp. 3-81. Cambridge, MA.: Bradford Books/MIT Press, 1999.

Loar, B., (1987) "Social Content and Psychological Content" in R. Grimm and D Merrill *Contents of Thought proceedings of the 1985 Oberlin Colloquium on Philosophy* Arizona: University of Arizona Press: 99-139.

Matan and Carey, S., (1981) 'Developmental Changes within the Core of Artifact Concepts' *Cognition* 78, 1-26.

Mercier, A., "Consumerism and Language Acquisition" *Linguistics and Philosophy* 17: 499-519.

Sawyer, S., this volume.

Segal, G., (1996) "Frege's Puzzle as some Problems in Science", *Rivista di Linguistica*, 8:2, 375-388

Segal, G., (2000) *A Slim Book about Narrow Content*, Cambridge, MIT Press.

Segal., G., (2003) "Ignorance of Meaning", in *The Epistemology of Language*, ed. A. Barber, Oxford: Oxford University Press.

Segal, G., (2004) "Reference, Causal Powers, Externalist Intuitions and Unicorns" in *The Externalist Challenge: Studies on Cognition and Intentionality*, Richard Schantz (ed.), (de Gruyter, 2004).

Wiggins., D., (2001) *Sameness and Substance* Cambridge: Cambridge University Press.