

Experimental Research on Substitution Intuitions in Simple Sentences

by

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## ABSTRACT

The purpose of this thesis is to present and analyze experimental evidence involving anti-substitution intuitions about co-referential names in simple sentences. In her book *Simple Sentences, Substitution, and Intuitions*, Jennifer Saul claims that anti-substitution intuitions involving co-referential names in simple sentences are particularly resistant, so much so that they exist even when one is given an identity statement that shows that the two names refer to the same individual. She uses this claim to motivate her thesis that a psychological explanation is needed to understand why these anti-substitution intuitions exist. Her theory is that before people know that two names co-refer to an individual, they have two "nodes" or "mental files" that contain information that is associated with the name. Saul claims that the reason anti-substitution intuitions in simple sentences involving co-referential names are resistant is that when people find out that two names co-refer to an individual, they do not merge the nodes into a single node, but instead the nodes are kept separate and are linked. The linked nodes then are capable of sharing information, though they do not do so by default. Instead, good reasons are needed for the sharing of information. The experimental results show that, contrary to Saul's claims, anti-substitution intuitions of this sort are not resistant such that they persist even when one is given the identity statement. This evidence is used to call into doubt the psychological explanation given by Saul and is used to raise the possibility that a particular implicature view can better explain these anti-substitution intuitions.

## DEDICATION

For Lauren. I couldn't have done this without you.

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## CHAPTER 1

### INTRODUCTION

In her book *Simple Sentences, Substitution, and Intuitions*, Jennifer Saul argues that in general people have so-called anti-substitution intuitions regarding sentences that include names that co-refer. Examples of such co-referential names are Superman and Clark Kent; Batman and Bruce Wayne; Spiderman and Peter Parker; etc. Saul claims that we not only have these intuitions regarding sentences that ascribe certain attitudes to other individuals (whether these individuals are fictional or real does not have any bearing on this claim), but that we also have these intuitions regarding so-called simple sentences. Furthermore, Saul claims that these anti-substitution intuitions regarding simple sentences are persistent, so much so that they continue even when someone is given the identity statement between the two co-referential names. Saul considers possible views that set out to explain these anti-substitution intuitions, but ultimately argues that there are unavoidable problems for each view and thus proposes her own theory explaining the intuitions.

The purpose of this paper will be to show that Saul is incorrect in at least her claim that anti-substitution intuitions regarding simple sentences are persistent and that in fact the results are quite murky when it comes to the question of whether these anti-substitution intuitions even initially exist in simple sentences. This will reopen at least one other possible explanation of anti-substitution intuitions that Saul argues against in her book.

In order to get to my argument, we must first explain the possible alternative positions to Saul's view and explain her arguments against these alternatives. In Chapter

2 I will consider such explanations. Chapter 2 sections 1 and 2 will go through semantic accounts that set out to explain away anti-substitution intuitions; section 1 will give accounts that do not involve contextual variation, whereas section 2 will give accounts that do involve contextual variation. Section 3 will give pragmatic accounts and in section 4 I will give Saul's account explaining these anti-substitution intuitions and their purported resistance.

In Chapter 3 I will give my own experimental research that definitively shows that these anti-substitution intuitions are not persistent and explain that they also show that things are not as cut and dry in the first place as Saul makes them out to be. I will then consider how each view that Saul dismisses might explain the experimental data in Chapter 4, ultimately concluding in Chapter 5 that there is at least one view that may be able to explain the results. I will not argue that this view should be preferred to Saul's view, I will instead make the much more modest claim that there is a viable alternative to her view, and that this viable alternative may be compatible with her view. Finally, in Chapter 6 I will consider possible limits to my experimental research and give suggestions for further experiments to take the experimental research beyond these limits. Chapter 7 will consist of a brief summary of the important points made.



## CHAPTER 2

### THEORIES EXPLAINING ANTI-SUBSTITUTION INTUITIONS

#### **Section 1: Accounts Without Contextual Variation**

##### **Section 1.1: Pitt's Alter and Primum Ego Theory**

David Pitt offers us a temporal part theory of why sentences (1) and (1\*) differ in truth value:

(1) Superman leaps more tall buildings than Clark Kent does.

(1\*) Superman leaps more tall buildings than Superman does.

He does this by claiming that some individuals have alter egos, which are collections of temporal parts of the individual. He also claims that when an individual has an alter ego, the names of the individual are not co-referential. For example, consider 'Bruce Wayne' and 'Batman': "Bruce Wayne should be understood as a man who decided to make himself a costume and fight crime under a new persona [Batman]" (Saul 31). Bruce Wayne, since he is the one with an alter ego, should be considered a primus ego. To be clear, Pitt does not believe that individuals that do not have an alter ego to be primus egos, that is, one can only be a primus ego if one has an alter ego. Therefore for Pitt, anything that Batman does is something that Bruce Wayne does, but not vice-versa.

So on Pitt's view, (1) and (1\*) differ in truth value because the names 'Superman' and 'Clark Kent' refer to two different alter egos of an individual, Kal-El, who is the primus ego. Since Kal-El goes by the name 'Clark Kent' at certain times (when he is in his suit and tie working at the Daily Planet, for example) and goes by the name 'Superman' at different times (when he is wearing tights and a cape saving people, for example), then of course it is possible for (1) to be true even though (1\*) must be false.

**Problems with this view:** Joseph Moore contests temporal-part views by giving the following example in (2) and (2\*):

(2) While talking on the phone to Superman, Lois looked through the window at Clark Kent.

(2\*) While talking on the phone to Superman, Lois looked through the window at Superman.

The problem, according to Moore, is that (2) seems true, while (2\*) seems false, but temporal part theories cannot accommodate this result because Lois is talking on the phone to Superman at the same time she is looking through the window at Clark Kent. So it seems that, on a temporal part view, (2) cannot be true because if ‘Clark Kent’ and ‘Superman’ represent temporal parts of the same individual Lois cannot be talking to Superman on the phone at the same time she looks through the window at Clark Kent. Similarly, Pitt’s view cannot accommodate (2) and (2\*), because Pitt has to be able to answer the question of which persona Kal-El is occupying when Lois is looking at Clark Kent but at the same time speaking on the phone with Superman. He can’t answer this question, because the temporal part that Lois is looking at is also the temporal part that is talking to her on the phone.

Saul claims that there are deeper reasons why Pitt’s view is wrong, namely that it gives very counter-intuitive result that (3) and (4) are both false:

(3) Superman is Clark Kent.

(4) Superman is Kal-El.

Indeed, Pitt believes that (3) is false but thinks that people mistakenly think it is true because they are thinking of (3) as meaning something more along the lines of (3P):

(3P) The person whose alter ego is Superman is the person whose alter ego is Clark Kent.

Furthermore, Pitt thinks that (4) is false, because *primum egos* (Kal-El, in this case) and alter egos are not the same, just like two alter egos cannot be the same.

Saul thinks that this explanation is unconvincing. For one thing, she claims (I think correctly) that most of us forget that Kal-El even is a character in the Superman comics. Therefore, we will not think of a person who adopted two alter egos. Then Saul claims that the flaws in Pitt's view can be further seen when taking into account (5):

(5) Bruce Wayne is Batman.

Since Bruce Wayne is not an alter ego, but is instead a *primum ego*, Pitt's view must be that when we utter (5) we are actually meaning (5P):

(5P) Bruce Wayne is the person whose alter ego is Batman.

The problem here is that Pitt's view treats (3) and (5) differently (because in (3) there are three entities at play, while in (5) there are only two entities at play), despite the fact that they are intuitively the same.

A final (and possibly the most convincing) worry that Saul has concerning Pitt's view is that Pitt's view relies completely on a subject creating alter egos for him or herself. This is a problem because there are cases in which it is some entity other than a human (or any type of animal, for that matter) is the subject of an identity statement involving anti-substitution intuitions, but this other entity cannot create for itself an alter ego. For example, consider (6) and (6\*):

(6) I visited St. Petersburg once, but I never made it to Leningrad.

(6\*) I visited St. Petersburg once, but I never made it to St. Petersburg.

‘St. Petersburg’ and ‘Leningrad’ are two names that refer to the same place at different points in time. But, as Saul points out, a city cannot create an alter ego for itself, and therefore (6) and (6\*) must take on the same truth value on Pitt’s view. The problem is that it seems difficult for Pitt to explain why (6) and (6\*) must both be false on his view while (1) and (1\*) may have different truth values.

**Predictions this view would make:**

Suppose we did a study where we went out and surveyed participants about their intuitions regarding simple sentences. Pitt’s view would predict that a participant would have the intuition that (1) is true and that (1\*) is false, because in (1) the participant would take the names ‘Superman’ and ‘Clark Kent’ to be referring to alter egos of the same individual (Kal-El). However, Pitt’s view would have an odd prediction with concerns to (7) and (7\*) if we explicitly led the participant to (7\*) from (7) and (3):

(7) Clark Kent went into the phone booth, and Superman came out.

(3) Superman is Clark Kent.

(7\*) Superman went into the phone booth, and Clark Kent came out.

The prediction that Pitt’s view would make is that, even though the participant would have the intuition that (7) and (3) are true (the participant would have the intuition that (3) is true because, as already noted, the participant would take (3) to mean something more like (3P)), the participant would still claim that (7\*) is false, because the ‘Superman’ alter ego was not the one to go into the phone booth, it was the one to come out of the phone booth, and the ‘Clark Kent’ alter ego was not the one to come out of the phone booth, it was the one to go into the phone booth.

**Section 2: Accounts with Contextual Variation**

## **Section 2.1: Joseph Moore's Aspect Theory**

According to Moore, if we have an unenlightened person who does not know that 'Clark Kent' and 'Superman' are co-referential names for the same individual, then it is obvious why they will believe that (8) and (8\*) have different truth values:

(8) Superman is more successful with women than Clark Kent.

(8\*) Superman is more successful with women than Superman.

It is because the unenlightened individual thinks that 'Superman' and 'Clark Kent' refer to two different people, and therefore based off of their belief in there being two separate entities they believe that (8) is true, while everyone (both enlightened and unenlightened) believes (necessarily so) that (8\*) is false. Furthermore, Moore believes that enlightened people too can believe that (8) and (8\*) have distinct truth values, but this can only happen because in such a situation 'Clark Kent' and 'Superman' are used to refer to two distinct 'aspects' of the individual Clark/Superman (Moore 94).

So for Moore, what is being said by enlightened individuals who claim that (8) is true is the following:

(8M) Clark/Superman's Superman-aspect is more successful with women than Clark/Superman's Clark-aspect.

Aspects are, he says, "primitive, irreducible, and somewhat indeterminate entities" (Moore 103). They are a collection of properties that are associated with the name by the participants of the conversation. What those properties are will depend on the context of the conversation. The context of the conversation concerns whether the participants in the conversation are enlightened or unenlightened. Another extremely important point about aspects is that they exist independently of our talk about them, but they "earn their keep

semantically”, by being things that are used in conversation to hold different bits of information about a person.

**Problems with the view:**

**The Aspect Problem:** The first problem that Saul points out for Moore’s view is called the Aspect problem. Put simply, Saul claims that in order for an account of this type to be successful, we must know both what Aspects are and how they are picked out. For Moore, Aspects are things that “instantiate the properties” that are associated with names in certain contexts. “Moore’s aspects are actually entities that can walk, talk, and leap tall buildings” (Saul 39). For example, when I speak of Superman I speak of a man who I think/have in mind who wears tights and a cape while saving people from harm, but when I speak of Clark Kent I speak of a man who I think/have in mind who wears a suit and tie while working at the *Daily Planet*. However, Saul points out some problems for Moore’s view. Take for example two people,  $S_1$  and  $S_2$ , who associate different properties with the name ‘Superman’ who are discussing a general claim about Superman.  $S_1$  thinks that ‘Superman’ denotes a man that wears tights and a cape, while  $S_2$  thinks that ‘Superman’ denotes a man that wears tights, but does not wear a cape. The problem this poses for Moore is that no aspect can be picked out by ‘Superman’, because the two individuals are associating different aspects with the name ‘Superman’. Therefore, the claim that  $S_1$  and  $S_2$  are discussing will have no truth value. But it seems absurd that the truth value of a claim should be hindered by such a slight disagreement.

However, this does not seem like a serious problem for Moore’s view, because it seems that the claim that  $S_1$  and  $S_2$  are discussing will indeed have a truth value, it just seems that they are talking past each other, making it impossible for them to conclude

(either correctly or incorrectly) that Superman fulfills that claim. So, for example, suppose  $S_1$  and  $S_2$  are discussing whether or not Superman flies. Saul is claiming that this might seem true to each of these individuals, but  $S_1$ 's belief does not seem true to  $S_2$ , and  $S_2$ 's belief does not seem true to  $S_1$ , because  $S_1$ 's concept of Superman does not fulfill  $S_2$ 's concept of Superman, and vice-versa. However, in this case it seems like "Superman flies" is something that both  $S_1$  and  $S_2$  believe, and it is also a true belief that they both hold.

On a more fair reading of Saul's view, we could look at the claim "Superman wears tights and a cape". In this case, it seems that Saul is correct,  $S_1$  and  $S_2$  would have different beliefs as to whether this is true or false.  $S_1$  would believe that "Superman wears tights and a cape" is true, while  $S_2$  would believe that it is false.

**The Enlightenment Problem:** Moore's theory also falls prey to the so-called enlightenment problem. Moore commits himself to his contextual view depending on (at least in part) the enlightenment of speakers and audiences engaging in conversation. That is, Moore's view only works when the speaker (and potentially the audience as well) is enlightened. Saul thinks this is a mistake, because when we consider sentences like (1) we do not think about whether the speaker (and the audience) was enlightened to Superman/Clark's double life, and the fact that we don't think about whether or not the speaker and audience is enlightened seems to show that the enlightenment of the speaker and audience is not relevant to our intuitions about the truth value of (1). However, as Saul acknowledges, this is not decisive because when discussing sentences like (1), we can assume that the speaker is enlightened. Perhaps it doesn't even cross one's mind that the speaker might not be enlightened. But suppose we introduced this possibility, by

assuming that the speaker is unenlightened. Suppose that the speaker is Lois, and that she is still ignorant to the fact that ‘Superman’ and ‘Clark Kent’ refer to the same individual. Lois, talking to her friend Miles, is giving a reason why Superman is better (or more interesting, or more attractive) than Clark Kent, and the reason she gives is (1). According to Saul, when we evaluate the truth value of (1) as uttered by Lois, knowing that she is unenlightened, we must now say that (1) is false, because we are no longer talking about aspects when assessing the truth value of (1).

I think Saul makes a mistake in her analysis of Moore’s argument when she objects that it is subject to the Enlightenment Problem. Saul takes Moore to be arguing that when we consider sentences like (1) and have the intuition that it is true, the speaker and audience must be enlightened that ‘Superman’ and ‘Clark Kent’ refer to the same subject. She thinks this because when we think (1) is true we must be thinking (on Moore’s view) of aspects of the individual. However, Moore does not need it to be the case that one is enlightened when one has the intuition that (1) is true. Moore’s view is intended to explain why the enlightened have the intuition that (1) is true, not to explain why the unenlightened have the intuition that (1) is true. It is compatible with Moore’s view that the unenlightened have the intuition that (1) is true simply because of the fact that they are unenlightened. That is, it is compatible with Moore’s view that the unenlightened have the intuition that (1) is true because they don’t know that ‘Superman’ and ‘Clark Kent’ co-refer. Moore’s view could be better explained like this:

- A. The unenlightened have the intuition that (1) is true because they don’t know that ‘Superman’ and ‘Clark Kent’ refer to the same subject.



B. However, the enlightened also have the intuition that (1) is true, but they do know that ‘Superman’ and ‘Clark Kent’ refer to the same subject.

C. The reason that the enlightened also have the intuition that (1) is true is that they think of ‘Superman’ and ‘Clark Kent’ as two different aspects of the same subject.

If my analysis of Moore’s view is correct, then, as we shall see in the next section, Moore’s view is the same as Forbes’ view.

A further benefit of reading Moore this way is that it leaves open the possibility that if we asked an enlightened individual to evaluate the truth value of (1) and told them to assume that (3) is true, they would say that (1) is indeed false. However, though I think that Saul is incorrect in claiming that Moore’s view is subject to the Enlightenment Problem, I think that she is correct in claiming that Moore’s view is subject to the Aspect Problem, and therefore agree that Moore’s view, as it stands, does not account for our intuitions regarding the truth value of sentences like (1).

### **Section 2.2: Forbes’ Modes of Personification View**

Graeme Forbes offers us a view where ‘Clark Kent’ and ‘Superman’ are co-referential names of the same individual, but sentences with propositions regarding these names contain propositions that actually deal with the so-called ‘modes of personification’ that are associated with the names. So, for example, (7) and (7\*) will actually be expressing propositions that are like (7F) and (7\*F):

(7) Clark Kent went into the phone booth, and Superman came out.

(7\*) Superman went into the phone booth, and Clark Kent came out.

(7F) Clark Kent, so-personified, went into the phone booth, and Superman, so-personified, came out.

(7\*F) Superman, so-personified, went into the phone booth, and Clark Kent, so-personified, came out.

Since there may be different modes of personification for each name ('Superman' may have a very different mode of personification than 'Clark Kent'), (7F) and (7\*F) can easily have different truth-values. And since, for Forbes, what is actually meant in (7) and (7\*) is what is said in (7F) and (7\*F), (7) and (7\*) can have different truth values. Forbes also allows that it is not always the case that propositions expressed in simple sentences include modes of personification, which allows him to accommodate sentences like (3) and (9):

(3) Superman is Clark Kent.

(9) Astounding – Superman spends a lot of time acting shy and nerdy!

**Problems with this View:**

**The Aspect Problem and the Enlightenment Problem are both problems for this view as well.**

**Differences in the two views:**

As one can see, Forbes' view is very similar to Moore's view. One way to distinguish the two is that for Moore, what matters is the *properties* that are thought (by the subject analyzing the sentences) to be instantiated by the aspect, whereas what matters for Forbes' view is being labeled 'Clark' by others. Another way to distinguish the two views is that on Moore's view the names 'Superman' and 'Clark Kent' are only sometimes co-referential, whereas on Forbes' view they are always co-referential. A final

way that these two views differ (at least according to Saul), is that for Forbes modes of personification are ways that individuals may be presented, for Moore aspects are entities that actually walk, talk, and leap tall buildings (Saul 39).

**Predictions of the Views:**

Both views would predict that when asked to evaluate sentence (1) and sentence (1\*), a participant (maybe of a survey) would say that (1) is true and that (1\*) is false and would be right in doing so. This is because the participant would be talking about aspects (according to Moore) or about modes of personification (according to Forbes).

Furthermore, both views would predict that if we explicitly led this participant through the identity statement he/she would no longer have the anti-substitution intuitions. To see this, first consider (7) and (7\*) on their own:

(7) Clark Kent went into the phone booth, and Superman came out.

(7\*) Superman went into the phone booth, and Clark Kent came out.

When considered on their own, according to Moore's and Forbes' views, (7) will be true, but (7\*) will be false, and this is because the participant evaluating the truth value of these two sentences is talking about either aspects or modes of personification, not the individual that 'Superman' and 'Clark Kent' refer to. However, now consider (7) and (7\*), but when we lead the participant from (7) to (7\*) with (3) as a second premise:

(7) Clark Kent went into the phone booth, and Superman came out.

(3) Superman is Clark Kent.

(7\*) Superman went into the phone booth, and Clark Kent came out.

Both Moore and Forbes would predict that the participant would (just like in the case where we do not lead the participant through the identity statement) start out already

having the intuition that (7) is true. However, since in this case we led the participant through the identity statement, Moore and Forbes would predict that the participant would now have the intuition that (7\*) is also true. This is because when we lead through the identity statement, we are essentially telling the participant to stop thinking about aspects or modes of personification and think about the individual.

### **Section 2.3: Predelli's Contextual View**

Stefano Predelli also offers an account using contextual variation, but his account has important differences from Moore and Forbes' views. Predelli's view differs from Moore's and Forbes' because he is a Millian about proper names, and therefore the propositions expressed in a sentence never vary with context. Instead, what varies with context for Predelli is what situations in the world would make such propositions true. He distinguishes between two different *occasions* in which (8) could be uttered:

(8) Superman is more successful with women than Clark Kent.

Predelli claims that in some occasions, what he calls 'simple occasions', the names 'Superman' and 'Clark Kent' will be taken as 'Superman/Clark Kent' twice over, and in other occasions, what he calls 'sensitive occasions', the names 'Superman' and 'Clark Kent' will make the superhero and reporter personae salient. So, for example, in some instances of uttering (8) we are uttering it in a context where 'Superman' and 'Clark Kent' are to be taken as 'Superman/Clark Kent' twice over, while in others the two names are making the personae salient. An example of where (8) is uttered in which we are to take 'Superman' and 'Clark Kent' as 'Superman/Clark Kent' twice over is a case in which we are considering the individual that 'Superman' and 'Clark Kent' refer to. So, suppose we explicitly told someone that we wanted them to evaluate the truth value of

(8), considering ‘Superman’ and ‘Clark Kent’ refer to the same person. In this case, we are making explicit a context in which the relation ‘leaps more tall buildings than’ does not hold. However, in contexts involving sensitive occasions, when we ask someone to evaluate the truth value of (8), the relation ‘leaps more tall buildings than’ holds because the names ‘Superman’ and ‘Clark Kent’ are making the superhero and reporter personae salient, and there is nothing there (such as making explicit that ‘Superman’ and ‘Clark Kent’ refer to the same person) to prevent the names ‘Superman’ and ‘Clark Kent’ from doing so.

### **Problems with the View:**

Saul points out that because Predelli makes use of personae but does not describe what personae are, he falls into the aspect problem as well. Again, the aspect problem occurs when a theory mentions certain entities that individuals supposedly have (whether it be aspects, modes of personification, or personae), but fails to give details as to what these entities consist in and how we can distinguish such entities from each other. She then points out that since, on Predelli’s view, the feature of context that decides what does and does not matter in a given situation to determine the truth value of a simple sentence utterance involving individuals with co-referring names is the interests, intentions, etc. of the conversational participants, his view also falls prey to the enlightenment problem. Again, the enlightenment problem is that a view using entities such as aspects (or in this case, personae) relies on the level of enlightenment of conversational participants. In order for this to be the case, our intuitions about simple sentences would have to vary depending on the level of enlightenment the conversational participants have. However, it is not the case that our intuitions about simple sentences

vary depending on the level of enlightenment of the conversational participants. The enlightenment problem affects Predelli's view because he does not give us much information as to how a conversational participant's interests, intentions, etc. decide what matters for settling the truth value of a simple sentence utterance. That is, Predelli's view does no better than Moore's or Forbes' views at explaining out intuitions regarding these sentences, and the reason is that his view tries to explain that our intuitions will vary depending on whether or not the conversational participants are aware of the distinct personae involved in the sentences, though there is no evidence that our intuitions actually vary based on whether or not the conversational participants are enlightened (that is, whether or not the conversational participants know that 'Superman' and 'Clark Kent' refer to the same person).

A final problem that Saul points out is that Predelli's view leaves open a very puzzling possibility, namely it leaves open the possibility that (1\*) may be true, depending on the context. This is puzzling because it seems to be counter-intuitive, that is, it seems like (1\*) will never be true.

Along similar lines, though Saul does not mention this, Predelli's view seems to leave open the puzzling possibility that (10) might in some contexts be false:

(10) Superman is Superman.

This is puzzling because it is an obvious contradiction that one not be oneself. I cannot fail to be me. Superman cannot fail to be Superman.

### **Section 3: Pragmatic Accounts of Dealing with Simple Sentence Anti-Substitution**

#### **Intuitions**

I will now turn to pragmatic accounts for dealing with anti-substitution intuitions in simple sentences. Here I should note that the difference between semantic accounts and pragmatic accounts for dealing with anti-substitution intuitions in simple sentences is that semantic accounts want to uphold the anti-substitution intuitions about simple sentences, but pragmatic accounts want to claim that anti-substitution intuitions about simple sentences are in error. This means that proponents of semantic accounts claim that subjects are right to think that sentences such as (1) are true, and therefore must explain why they are right in thinking that (1) is true but (1\*) is false, while proponents of pragmatic accounts claim that subjects are making some sort of error when they judge that sentences such as (1) are true. The most common explanation for why subjects are in error when judging that sentences such as (1) are true is conversational implicature. In what follows I will give the pragmatic accounts that Jennifer Saul discusses, and I will give her objections to each account.

### **Section 3.1: Barber's Implicature View**

Alex Barber offers a view of simple sentence intuitions that involves conversational implicatures, with the added twist of insisting that we need an account of belief reporting that vindicates anti-substitution intuitions. This means that Barber's account must explain why we are allowed to explain away anti-substitution intuitions in simple sentences but are not allowed to do so in belief reporting intuitions. He does this by arguing that his account is unavailable to those who do not allow substitution to be blocked in simple sentences. For Barber, we can explain why (1) might seem true between two (or more) enlightened conversational participants by appealing to the conversational implicatures captured (roughly) by (1B):

(1) Superman leaps more tall buildings than Clark Kent.

(1B) Superman/Clark Kent, when Supermanizing, leaps more tall buildings than Superman/Clark Kent, when Clark Kentizing.

So, with the example above, suppose we have two speakers,  $S_1$  and  $S_2$ .  $S_1$  utters sentence (1) to  $S_2$ .  $S_2$  knows that (1) is false (because ‘Superman’ and ‘Clark Kent’ refer to the same individual), but also knows that  $S_1$  knows that ‘Superman’ and ‘Clark Kent’ refer to the same individual.  $S_2$  also knows that  $S_1$  is trying to be a cooperative conversational participant and is trying to say true things. Because of this,  $S_2$  understands that  $S_1$  must be trying to get something else across – namely that the conditions that currently obtain are the same (or at least very similar) to the conditions that would cause an unenlightened individual to utter (1). This is because in order for an enlightened person to both be making an attempt to be a cooperative conversational participant that says true things and at the same time utter a sentence like (1), that person must be trying to implicate that the conditions that currently obtain are ones that would make (1) seem true, and the only conditions that would make (1) seem true are conditions in which the person who is evaluating the truth value of one (and thus judging it to be true) is an unenlightened individual.

### **Problems with Barber’s View**

According to Jennifer Saul, Barber’s account also falls prey to the Aspect and Enlightenment problems. Just like Moore and Forbes must do, Barber must give an account that explains what attributes like Clark Kentizing and Supermanizing are, in addition to explaining how we can communicate such attributes. According to Saul, the



Aspect Problem introduces a new complication to Barber's view and asks us to consider the following example:

(11) Lois woke up in bed next to Superman but she never woke up next to Clark.

(11\*) Lois woke up in bed next to Clark, but she never woke up next to Clark.

According to Saul, (11) might be intuitively true, while (11\*) most certainly could not. She claims that Barber's response would be that what is actually being conversationally implicated is (11B):

(11B) Lois woke up in bed next to Superman, when Supermanising, but she never woke up next to Clark, when Clarkising.<sup>1</sup>

She claims that this is a problem because for Barber, the reason that (11B) is true is because Lois would call the man she is lying next to in bed 'Superman', and to Saul it seems odd that Lois should be the one that "counts" in the situation. One possible reply that Saul considers is that one might say that in a situation with an actual observer, it is always the actual observer's opinion that settles the matter. However, she then gives us the example of Myrtle, an outside observer whose opinion would be that Lois is lying in

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<sup>1</sup> It seems to me that Saul is incorrect as to how (11B) would be stated. It seems like the correct way to state (11B) would be this: "Lois woke up in bed next to Superman, when Supermanising, but she never woke up next to Superman, when Clarkising." This actually also seems wrong to me, as it seems that in this case Barber's theory is closer to that of Pitt's Primum and Alter Ego account. The best way to correctly represent Barber's (and almost everyone else's views, for that matter), is to state (11B) as follows: "Lois woke up in bed next to  $x$  when Supermanising, but she never woke up next to  $x$  when  $x$  was Clarkising.

bed with a man that she (Myrtle) would call 'Clark'. In this case, Saul claims, (11B) would be false, and yet (11) would remain true, which would be a case that Barber's account could not explain.

The Enlightenment Problem occurs for Barber, according to Saul, because there are cases of anti-substitution intuitions among enlightened conversational participants that simply cannot be explained by conversational implicatures. For example, consider Lois uttering (1) to her friend Miles:

(1) Superman leaps more tall buildings than Clark.

Barber's account (according to Saul) would be that (1) seems true because it implicates (1B):

(1B) Superman/Clark when *Supermanising*, leaps more tall buildings than Superman/Clark, when *Clark Kentising*.

And it seems to Saul that in a case where both Lois and Miles are unenlightened, (1B) could not be implicated by Lois's utterance of (1), and yet we still seem to have the intuition that (1) is true.

A further problem for Barber's view is that it is unclear why, in ordinary circumstances, an enlightened individual would want to implicate something like (1B) to another enlightened individual. Of course there are some reasons where this is useful, such as when we (the enlightened) are trying to talk to another enlightened individual in the presence of an unenlightened individual and are trying not to ruin the story/movie for that unenlightened individual, but there do not seem to be such reasons in ordinary contexts. However, perhaps Barber could concede this point. Barber may be able to concede this point without any harm to his view by claiming that, though it's true that

enlightened individuals would have no reason to implicate (1B) by uttering (1), an enlightened individual would only try to implicate (1B) by uttering (1) in a situation where they would have a reason to do so. So, on this possible reply, Barber would have to claim that in ordinary situations enlightened individuals would never utter (1), because (1) is false.

### **Section 3.2: Naïve Implicature Views**

Naïve Implicature views like the one put forth by Nathan Salmon and Scott Soames are ones that maintain that a name's sole semantic contribution is always simply its referent. The way that sentences like (12) and (12\*) vary in truth value on this view is that the two sentences carry different conversational implicatures, implicatures that will make reference to *guises* under which Lois's beliefs are held (Saul 69)

(12) Lois believes that Superman flies.

(12\*) Lois believes that Clark Kent flies.

The guise that is at play in (12) is something like 'Superman can fly', while the guise that is at play in (12\*) is something like 'Clark Kent can fly'. The difference between this view and Barber's view is that this view The main difference between this view and Barber's view is that Barber's view requires there to be a difference in truth value between (13) and (13\*), while the Naïve Implicature views require (13) and (13\*) to have the same truth value:

(13) Lois believes that Superman is the semantic value of 'Superman'.

(13\*) Lois believes that Clark is the semantic value of 'Superman'.

As Saul points out: A proponent of Barber's approach, then, is still in need of a reason to accept the violation of anti-substitution intuitions about simple sentences while refusing to accept parallel intuition violations regarding belief sentences" (Saul 72).

### **Problems with Naïve Implicature Views**

The Aspect Problem and the Enlightenment Problem are the main difficulties for Naïve Implicature views, just as they were for Barber's implicature view. We still need an adequate account of what Supermanising and Clark Kentising actually are, and how we can communicate these attributes to overcome the Aspect Problem, and we still have anti-substitution intuitions in cases in which implicatures are not available to explain them.

### **Section 3.3: Sperber and Wilson's Implicature View**

Dan Sperber and Diederik Wilson have a view of implicature very different from that of Grice, in that their view does not assume (nor require) that Grice's three conditions for conversational implicature are necessary. "For Grice, a person conversationally implicates  $q$  by saying that  $p$  only if:

- (a) He is to be presumed to be following the conversational maxims, or at least the cooperative principle;
- (b) The supposition that he is aware that, or thinks that,  $q$  is required to make his saying or making as if to say  $p$  (or doing so in *those* terms) consistent with this presumption; and
- (c) The speaker thinks (and would expect the hearer to think that the speaker thinks) that it is within the competence of the hearer to work out,

or grasp intuitively, that the supposition mentioned in (2) is required”  
(Saul 66).

For Sperber and Wilson, an implicature is defined as follows:

“Any assumption communicated, but not explicitly, is implicitly  
communicated: it is an implicature” (Sperber and Wilson 1986: 252).

This means that Sperber and Wilson’s view requires that the audience must grasp the implicature in order for a proposition to be implicated, but does not require the other conditions that Grice claims are necessary for conversational implicature to be present.

### **A Problem for Sperber and Wilson**

The main problem, according to Saul, for Sperber and Wilson’s view is that it fails (or will fail) to capture all of our intuitions. This can be seen in the case of Lois uttering (1) to her friend Miles. Miles is unenlightened, so he therefore cannot possibly be grasping (1B) when (1) is uttered. I have already discussed why this may not be a problem in the first footnote, so I will not discuss this particular problem any further.

One problem for Sperber and Wilson that Saul does not mention is that it is unclear what implicit assumption is being communicated in (1). Furthermore, even if it was clear what the implicit assumption is, it is unclear how it is being communicated. There are very clear cases of implicit assumption, such as when someone sarcastically remarks ‘you look like you had a great night’s sleep’ to someone who walks in the door and looks extremely exhausted. However, (1) is not a case of sarcasm, and it is therefore difficult to see what is being implicitly communicated. Perhaps what is being implicitly communicated in (1) is, just like in Barber’s view, that the conditions that hold are those

that of an unenlightened individual. However, then the challenge for Sperber and Wilson would be to show how their view is different from that of Barber.

### **Section 3.4: Davis's Implicature View**

Wayne Davis has yet a different view of implicature. For him, it is only the speaker meaning that matters, not the audience's interpretation. However, this view also fails, because as shown by the case of Lois and Miles, Lois does not intend to implicate (1B) when she utters (1), and therefore the intuition that Lois's utterance is false has no explanation on this account (Saul 75).

In discussing Davis's implicature view, Saul concludes that all accounts involving conversational implicature have the same problem, which is that conversational implicature does not apply to our intuitions concerning simple sentences that are uttered by unenlightened conversational participants.

However, it seems to me that Saul is confusing the point that proponents of conversational implicature are trying to make. They would think that (1) does not seem true to *us*, the enlightened observers of this hypothetical scenario. They would however think that (1) does seem true to *Lois* and to *Miles*, but not because of any sort of implicature. Instead, they would think that (1) does seem true to Lois and Miles because they are unenlightened. So for proponents of conversational implicature, in this situation nothing is actually being implicated, because implicatures happen between *enlightened* participants, not unenlightened ones. When we take (1) to be true when we are considering (1) being uttered by Lois to Miles, we do so because we know that Lois and Miles are unenlightened. However, whenever we take (1) to be true on its own, we are doing so because we are implicating something more along the lines of (1B).

In order for my response to be correct, the implicature theorist must hold that there are two ways in which sentences such as (1) can be true, one way for the enlightened and a different way for the unenlightened. The unenlightened are simply ignorant to the fact that ‘Superman’ and ‘Clark Kent’ co-refer, and they therefore make the error of judging (1) to be true because they think that it is just that, a true statement. The enlightened, on the other hand, may still judge that it is true, by implicating something that actually is true. However, even if I am correct in claiming that Saul makes a mistake in her evaluation of implicature views, the proponent of conversational implicature must still address the problem of what it means for Superman to be ‘Supermanising’ and what it means for him to be ‘Clark Kentising’.

### **Section 3.5: Saul on EOI**

Jennifer Saul states in chapter 4 of her book that the reason the Enlightenment Problem arises is that we tend to have a problematic assumption about intuitions called *Expressed or Implicated* (EOI).

*Expressed or Implicated (EOI)*: For an utterance of a sentence *S* in a context *C*, the truth-conditional intuitions of competent, rational speakers who are relevantly well-informed must match the truth conditions of either what is (semantically) expressed or what is implicated by *S* in *C*.

According to Saul, the best accounts for identifying our truth-conditional intuitions about simple sentences are ones that utilized contextual variation, and they come in two varieties. The first variety puts forth that our intuitions about simple sentences are correct, that is, we think that sentences like (1) are true, it is correct that they are true, and attempts to explain why they are true despite the

fact that (1\*) is clearly false. The second variety proposes that our intuitions about simple sentences are incorrect, because they select what is implicated rather than what is expressed. So, for this variety, sentences like (1) are in fact false (what is expressed in the sentence is false) but seem true because something further is implicated, and the truth conditions match that implicature (not what is expressed). Therefore, the first variety is claiming that our intuitions assign the correct truth conditions to sentences like (1) because what is expressed is literally correct, while the second variety is claiming that our intuitions correctly match up with what is implicated in the utterance, even though what they express is literally false.

Saul claims that though most theorists about simple sentences do not explicitly accept EOI, all of the semantic and pragmatic theories seem to implicitly accept it. She says that this would make sense if there were some reason to assume that EOI is true, but she argues that this is not the case. Before she gets to her argument that EOI is a false assumption, Saul first discusses why we tend to accept EOI in the first place.

Saul first discusses the Gricean theory that deals with what is *said* and what is *implicated* (SOI). Saul claims (though she acknowledges that this is a controversial claim) that Grice's theory more or less can be equated to EOI, and proceeds by discussing how two different ways of understanding Grice's thesis might lead us to accept EOI. The first way is the "Speaker Meaning Perspective". According to the speaker meaning perspective, what matters to us most in language is communicating what we mean and figuring out what others mean. We



are interested in what someone says mainly because it is a way for us to figure out what is meant by that utterance. This brings in the potential for confusion, as sometimes what is meant is different from what is said. So, Grice's implicature theory is a way of accommodating the aspects of speaker meaning that do not make it into what is said (Saul 81). When our intuitions go wrong, it is because we are focusing on what is implicated by the speaker, not on what the speaker actually says. This is the thesis that speaker meaning is exhaustive, that is to say it divides exhaustively into what is said and what is implicated. Saul argues against this thesis.

Saul first argues against the thesis that speaker meaning is exhaustive by giving us an example where the speaker tries to implicate something but fails to do so. She claims that because the speaker attempts to implicate something but fails, what the speaker means is neither said nor implicated. The example Saul gives is one about a student who has asked her for a letter of recommendation, one that she assumes is for Philosophy jobs. Her student is quite incompetent as a philosopher, and in an attempt to convey (or implicate) this to the readers (who again she assumes are looking to hire a philosopher), she says that her student is a very good cook. Saul then reveals that her student has given up on philosophy, and is instead asking her for letters of recommendation for jobs as an entry-level chef. So, unbeknownst to her, what Saul meant by saying that her student is a very good cook is in effect neither said (because she didn't say that her student was a bad philosopher) nor was it implicated (because the readers failed to pick up on the implication that Saul's student is an incompetent philosopher).

Saul considers a reply to this objection to the speaker meaning exhaustiveness criterion that says that the objection is unfair because the subject (Saul, in this hypothetical scenario) is not relevantly well informed. She does not know that her student is applying for a chef position, and therefore is not informed in the ways that would make her intended meaning of “my student is a very good cook” understood by the audience. Saul claims that this reply is misguided, because the speaker meaning exhaustiveness criterion is meant as a claim about *the nature of* speaker meaning, not about intuitions. It is the nature of speaker meaning that some speakers are incompetent, some are irrational, and some are misinformed. So, according to Saul, those who want to understand speaker meaning must understand what is meant by these speakers, not just the speakers who are relevantly well informed.

The second example that Saul asks us to consider is of a sentence uttered by George W. Bush during a speech in 2002:

- A. “The law I sign today directs new funds and new focus to the task of collecting vital intelligence on terrorist threats and on weapons of mass *production*” [Emphasis mine] (Saul 87).

Presumably, Saul points out, what Bush meant to say was this:

- B. “The law I sign today directs new funds and new focus to the task of collecting vital intelligence on terrorist threats and on weapons of mass *destruction*” (Saul 87).

In this case, George W. Bush failed to say what he meant (because he said the wrong word at the end of the sentence) and he also did not implicate what he

meant. Therefore, according to Saul, speaker meaning does not divide exhaustively into what is said and what is implicated. And since speaker meaning does not divide exhaustively into what is said and what is implicated, we should not accept SOI (and therefore should not accept EOI).

Saul then considers a possible way to save the claim that speaker meaning is exhaustive, and therefore to save SOI (EOI). She considers the possibility of abandoning some of Grice's claims about implicature, and taking the claim that speaker meaning is exhaustive as fundamental to understanding implicature. By taking speaker meaning being exhaustive as fundamental, we would in effect be insisting that what is implicated just is what is meant but not said by the speaker (Saul 88). The implications of this understanding of implicature are that implicature-based theories of intuitions regarding identity cases are much easier to defend, but are so at a cost. The cost is that traditional tests, such as calculability become irrelevant to figuring out whether or not an implicature is present in an uttered sentence. However, as Saul points out, even though this view of implicature is a departure from traditional views, it is a view that could allow implicature-based theories to succeed.

Saul then goes on to explain that even if the claims about speaker meaning tracking (SMT) and speaker meaning exhaustiveness (SME) are correct, we still may lack evidence for SOI. The reason for this is that, even if it's true that our intuitions must be about what is either said or what is implicated, we have no guarantee that our intuitions will correctly reflect the truth conditions of that which they are about (Saul 91). That is to say, our intuitions about what is said

and/or what is implicated are affected not only by what is said and/or implicated, but are also affected by the way we *process* what is said and/or implicated.

Therefore, even if one grasps what is said and/or implicated, there is no guarantee that one will correctly evaluate the truth conditions about what is said and/or implicated.

### **Section 3.6: Bach's View that Abandons EOI**

Kent Bach rejects EOI, because for him what a speaker means is often not what their utterances semantically express, instead it generally includes far more than what is semantically expressed. So, conversational implicatures are one example of this, but there are others, what Bach calls conversational implicatures (*not* to be confused with conversational implicatures). An example of a conversational implicature is (14):

(14) Jack and Jill are married.

For Bach, (14) semantically expresses a true claim even if Jack and Jill are not married to each other, but are married to other people instead. However, as Bach points out, when a speaker utters (14) they typically mean something like what is expressed in (14\*):

(14\*) Jack and Jill are married to each other.

So, for Bach, sentence meaning does not fully determine speaker meaning. There are three elements to speaker meaning, according to Bach:

(A) (sometimes) what is semantically expressed.

(B) Conversational implicatures.

(C) Conversational implicatures.

So, Bach is claiming that our intuitions that (14) is true are coming not from what is actually expressed (since what could be expressed is that Jack and Jill are married to

other people, not to each other), but are instead coming from the implicature (14\*). The reason this is the case, according to Bach, is that it is far more likely that a speaker will mean what (14\*) expresses rather than the simpler (and more open) claim that (14) expresses.

The problem with Bach's view is that again (according to Saul), it falls prey to the example of an unenlightened Lois talking to an unenlightened Miles.

### **Section 3.7: Soames' View from Beyond Rigidity<sup>2</sup>**

In *Beyond Rigidity*, Scott Soames puts forth a view that claims that intuitions can be explained by propositions other than those that are semantically expressed or implicated, and for him the third alternative is that our intuitions are due to what is asserted. "For Soames, the semantic content of a sentence *S* is, roughly what is asserted by all literal, non-ironic, non-metaphorical utterances of *S* by competent speakers" (Saul 109). For Soames, assertive utterances of sentences depend on the semantic content of *s* AND the obvious background assumptions in the conversation as well as the speaker's intentions about how his/her remark is to be interpreted. Soames says that what is said is what is asserted, but takes assertion to be something quite different from semantic content (for Saul, semantic content is what is expressed). He thinks that what speakers tend to focus on when evaluating a sentence is what is asserted rather than what is expressed by the semantic content of the sentence.

This being the case, Soames (and supporters of his view) could give us a different explanation of simple sentence intuitions. On this view, our mistaken intuitions about simple sentences involving co-referential names are a result of what those simple

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<sup>2</sup> This is not a summary of Soames' view as he describes it in *Beyond Rigidity*, but is a summary of Soames' view as described by Jennifer Saul in her book.

sentences assert rather than what they implicate. So, for this interpretation of Soames, when someone utters a sentence like (8), and someone has the intuition that (8) is true, what that person (the one having the intuition) is doing is asserting something beyond the semantic content of the sentence:

(8) Superman is more successful with women than Clark Kent.

So what is happening, on Saul's expansion of Soames' view, when one has the intuition that (8) is true, is that one is asserting what is expressed by (8\*\*):

(8\*\*) Superman, the guy who flies around in tights and a cape and saves people, is more successful with women than Clark Kent, the shy and nerdy reporter at *The Daily Planet*.

However, Saul claims, this possibility would fail to make sense of our anti-substitution intuitions, because (8\*\*) is false on Soames' view. This is because, on Soames' view, Superman the guy who flies around in tights and a cape and saves people *just is* Clark Kent the shy and nerdy reporter at *The Daily Planet*. Soames' view of assertion could work if (8) were taken to assert what Moore and Forbes think is expressed in (8M) or (8F). In their view, what is being expressed by what is said in (8) is actually more like (8M) or (8F):

(8M) Clark/Superman's Superman-aspect is more successful with women than Clark/Superman's Clark-aspect.

(8F) Superman, so-presented, is more successful with women than Clark Kent, so-presented.

However, as Saul argues, this view too falls prey to the Enlightenment Problem expressed by the case of Lois and her friend Miles. Recall that in this case, we take Lois,

who is unenlightened, to utter (8) to her friend Miles, who is also unenlightened. So, in this case Lois will not be asserting anything like (8M) or (8F), because she is unenlightened and has no reason to assert either (8M) or (8F).

#### **Section 4: Jennifer Saul's View**

Jennifer Saul claims to offer us a view that explains mistaken intuitions about simple sentences “as arising from something other than the entertainment of intuition-matching propositions” (Saul 125). She then asks us the question: “what goes on, cognitively speaking, when we encounter sentences like (1) and (1\*) and evaluate them for truth value?” (Saul 125). The answer to this question is quite complicated. She points out that many things can go wrong in evaluating simple sentences, such as misreading, mishearing, or simply misunderstanding the content of the sentence. We do have some explanations for why some of these mistakes occur, though we do not have a single explanation that encompasses all of them. Saul then says that we should instead focus on cases where none of these mistakes occur (and yet we still have different intuitions regarding the truth value of the sentences), and try to answer the question (what goes on, cognitively speaking, when we encounter sentences like (1) and (1\*) and we do not make these mistakes?). Two initial possibilities that she discusses are the Fregean and Millian views. The Fregean view is that the propositions entertained in (1) and (1\*) are two different propositions, and that is why they appear to have two different truth values (indeed, on the Fregean view, since the propositions entertained in (1) and (1\*) are different, they do have two different truth values). The Millian view, on the other hand, holds that there is one single proposition that is expressed in both (1) and (1\*), but (1) and (1\*) are two different ways of expressing that same proposition.

Saul then turns to see what resources are available to people who do not make this sort of move (the move to say that (1) and (1\*) differ in truth value). She says that the first thing we should remember is that we do not automatically make all of the inferences that we can. For example, when I am told that subzero temperatures will hit the Midwest today, I do not automatically infer that either the Midwest will experience subzero temperatures today or I will call in sick to work.

Saul puts forward a view that instead of focusing on an account that explains incorrect intuitions by discussing the conversational participants' focuses on the states of mind of those who are having these intuitions. Saul claims that it is possible that one might fail to entertain the identity statement (3) when considering sentence (1) and that could be why they believe sentence (1) is true even though it is false.

(3) Superman is Clark Kent.

Saul thinks that this is possible because we store *Superman* information separately from *Clark Kent* information. This is done by setting up what she refers to as 'nodes', which are just things that are associated with both a name and various bits of information. So, on this view, there are two commonly used nodes with concerns to the Superman stories, one node associated with the name 'Superman', and the other node associated with the name 'Clark Kent'. For the enlightened, a link is set up between the Superman node and the Clark Kent node, and those two nodes still store different information. This, Saul argues, is a good explanation as to why we might think that (1) is true, though we (the enlightened) never think that (1\*) is true. It is because we do not always use the link that is set up between the Superman and Clark Kent nodes, nor are we required to.



Saul then claims that we need to explain why we (the enlightened) are not always in a habit of integrating Superman and Clark Kent information between nodes, especially when we are explicitly told (3). She thinks that the explanation that best fits is that we have a strong tendency to separate information that we learn under different names and different descriptions (Saul 128). She comes to this conclusion by looking at some experiments run by John Anderson and Reid Hastie, who studies how people store information about proper names and a description that is said to co-refer with that proper name.

In these studies, participants are lead through three phases. The first phase is what Saul dubs the “Identity Learning” phase, where participants are told “James Bartlett is the lawyer”; the second phase, called the “Other Learning” phase, where participants are given other information about the names or the descriptions (Saul’s example is that the participants are told “James Bartlett rescued the kitten”); the third phase is called the “Verification” phase, where the participants are asked to give truth values for three kinds of claims: a) claims that were explicitly taught in the Other Learning phase, b) claims that can be inferred from the combination of claims that were explicitly taught in the Other Learning phase and the Identity Learning phase, c) claims that fit neither of these categories. Saul then goes on to say that in some studies participants were first given the Identity Learning claims before they were given the Other Learning claims, and in other studies the participants were given the Other Learning claims before they were given the Identity Learning claims. So, for example, in some studies participants were told “James Bartlett is the lawyer” before they were told “James Bartlett rescued the kitten”, while in other studies, this was reversed. In cases where this was reversed, Anderson and Hastie

found that participants were significantly worse at assigning the correct truth values in b. (that is, when the participants were told that James Bartlett rescued the kitten before they were told that James Bartlett is the lawyer, the participants were significantly more likely to say that “The lawyer rescued the kitten” is false).

This is where Anderson’s “nodes” hypothesis comes in. The “nodes” hypothesis says that when individuals learn an identity between a proper name and a description, the node that represents the proper name links with the node that represents the description that co-refers with that name. In Anderson’s theory, when the nodes link they begin a process of integrating information into one node, by choosing one node and copying information from the other node before abandoning it (the node not chosen). However, Anderson contends that this information integration between nodes is not immediate, it takes a good bit of time. This, Anderson thinks, is why the participants who were given the sentence “James Bartlett rescued the kitten” before they were given the sentence “James Bartlett is the lawyer” were significantly worse at giving the correct truth value for the sentence “The lawyer rescued the kitten” than the participants who were given the sentence “James Bartlett is the lawyer” before given the sentence “James Bartlett rescued the kitten” (Saul 129).

As already noted, Saul argues that we store information about two co-referential names differently from one another. That is, she thinks we store *Superman* information separately from *Clark Kent* information. Saul then argues that we may have good reason (such as making the recollection of the comic book easier to understand) to avoid copying information from one node to another, and in these cases she thinks that we don’t begin a process of copying the information at all. Instead, we use the link that was initially

formed when we learned that “Superman” and “Clark Kent” refer to the same person to infer information from one name to the other. However, she points out, we don’t always do this, and in fact we may avoid doing this except for when it is necessary to get across some other point. For example, we may avoid using this link when we give an account about what Lois thinks about Superman versus what she thinks about Clark, but we may have to use it when judging whether or not the entity denoted by “Superman” and “Clark Kent” will be hungry when Lois asks him out to lunch when he just recently ate a very large meal (in this case, we are to suppose that this individual ate a big breakfast dressed as Clark Kent, and when Lois sees him he has changed clothes into his Superman tights and a cape). In the second case, we have to use the link to determine whether or not the individual will be hungry enough to eat lunch with Lois.

Saul gives some standard simple sentences in which she thinks the subjects evaluating them will fail to use the link to make inferences. One example is between sentences (1) and (1\*), because the information we have stored in the “Superman” node is that he is strong and capable of flying (or at very least jumping very high), whereas the information we have stored in the “Clark Kent” node is much the opposite, in that he is weak and limited by his normal human body. She thinks that in these cases it is quite easy to explain why the subjects would not be willing to make the inference from (1) to (1\*), nor to infer that (1) must be false given that (1\*) is false. The explanation is that we have a good reason for not establishing the link and therefore for not reflecting on the identity. More difficult, however, is providing an explanation of why subjects might not integrate in cases of (7) and (7\*) where it is obvious that “Superman” and “Clark Kent” co-refer.

Saul provides a simple explanation. She claims that just because one reflects on the fact that “Superman” and “Clark Kent” co-refer to the same individual does not mean that one must (or even does) make all of the inferences that one could make from it. Just because I can infer from “Superman is Clark Kent” and “Superman went into the phone booth and Clark Kent came out” that Clark Kent went into the phone booth and Superman came out does not mean I actually do so.

Saul then gives us reasons why some people integrate two nodes more easily than others. The two reasons she considers are habit (some people have a habit of integrating beliefs that are stored under two different names) and having a good reason to do so. First she discusses how someone might get in the habit of integrating beliefs. One such reason is personal tendency. The example that Saul gives is that if the thing that one finds most fascinating about the Superman stories is that shy and nerdy Clark Kent in fact is Superman (so when Superman flies, so does Clark Kent), then one will be reflecting on the identity a lot and will be more likely to make the inferences that follow from the identity. A second reason might be that the habit of integrating beliefs is a professional one. A philosopher of language who studies substitution of co-referential names in simple sentences, for example, may form the habit of integrating beliefs. Next she discusses good reasons one might have for integrating two nodes more easily than others. One reason might be believing in a certain semantic theory. Fregeans, for example, who have considered the theory thoroughly and take it to be well supported, have a good reason to integrate nodes of co-referential names.

In the last section of her book, Saul suggests that in order to evaluate her theory that our intuitions regarding simple sentences can be explained by psychological

processing, we should have empirical data to back up the claim (regardless if it supports or undermines the account). She then gives us different ways that supporting or undermining data might be discovered. For our purposes, we only need to consider the experiment she offers us in section 6.10.3 of her book, titled “Simple sentence intuitions”. In this section, Saul gives us an easy-to-conduct experiment that is intended to test the resilience of anti-substitution intuitions among co-referential names.

In this experiment, there are two separate surveys that we are to give to two separate groups or participants. In the first survey, we give participants sentence (7):

(7) Clark Kent went into the phone booth and Superman came out.

And then ask them to evaluate sentence (7\*):

(7\*) Superman went into the phone booth and Clark Kent came out.

In the second survey, we are to give participants sentence (14) and sentence (2):

(7) Clark Kent went into the phone booth and Superman came out.

(3) Superman is Clark Kent.

And then ask them to evaluate sentence (7\*):

(7\*) Superman went into the phone booth and Clark Kent came out.

She then gives us a list of the possible outcomes of this experiment. The first possible outcome is that subjects insist that (7\*) is true in both surveys. If this were to happen, Saul acknowledges that the whole premise of her book would be undermined. The second possible outcome is that subjects deny that (7\*) must be true in the survey where we do not give the participants (3), but insist that (7\*) must be true in the survey where we do give the participants (3). If this were to happen, Saul says that it would show that though anti-substitution intuitions are initially present, they are easily

undermined. Therefore, in this case, we would only need to explain why it is that anti-substitution intuitions are initially present. The final possible outcome is that subjects deny that (7\*) must be true in both surveys. If this were to happen, it would show that Saul is correct that anti-substitution intuitions about simple sentences are present and that they are resilient.

When reading this portion of Saul's book, I had the intuition that most people would not say that (7\*) was false when given the identity statement. So, in an effort to test my intuition about Saul's hypothesis, I decided to follow her suggestion and test the data by running some surveys to gauge the intuitions of ordinary people regarding simple sentences. The method and results to these experiments are in the section that follows.

## CHAPTER 3

### EXPERIMENTAL PHILOSOPHY AND ANTI-SUBSTITUTION INTUITIONS

In a preliminary round of my surveys, I used the conditions exactly as Saul lays them out in her book. The overwhelming majority of participants claimed that (7\*) was true in both conditions, not just the condition where they were given (3). However, I realized that there may have been a flaw with the conditions as Saul set them out in her book. When considering the sentences, I realized that participants may have been thinking about the proposition in (7\*) as following (temporally) proposition (7). That is, I realized that, as the propositions were presented in (7) and (7\*), it left open the possibility that the participants were reading the conditions as Clark Kent went into the phone booth and Superman came out *then at some later time* Superman went into the phone booth and Clark Kent came out.

In order to avoid this worry, I came up with some revisions to make the conditions more salient in the actual surveys to be used for analysis. The revisions are as follows in (15) and (15\*):

(15) Clark Kent went into the phone booth and Superman came out at  
11:15 AM on August 8<sup>th</sup>, 1991.

(15\*) Superman went into the phone booth and Clark Kent came out at  
11:15 AM on August 8<sup>th</sup>, 1991.

These changes eliminated the risk of participants thinking about the conditions as following in some temporal order, because it gives them the exact same date and time in each condition. As suspected, this did have an effect on the outcome of the surveys, though not an effect drastic enough to put the results towards the false side.

## **Section 1 Experiment 1: The Method**

The method of this experiment was to give two separate surveys to two separate sets of participants. In the first set of surveys, participants were told to assume that the Superman stories are true, and to also assume that the following sentence is true:

(A) Clark Kent went into the phone booth and Superman came out at  
11:15 AM on August 8<sup>th</sup>, 1991.

They were then asked to evaluate the degree to which they agreed or disagreed with the following sentence:

(B) Superman went into the phone booth and Clark Kent came out at  
11:15 AM on August 8<sup>th</sup>, 1991.

Participants were given five possible answers to choose from: strongly disagree, somewhat disagree, neutral, somewhat agree, and strongly agree.

In the second set of surveys, participants were told to assume that the Superman stories are true, and that the following two sentences are true:

(A) Clark Kent went into the phone booth and Superman came out at  
11:15 AM on August 8<sup>th</sup>, 1991.  
(B) Superman is Clark Kent.

They were then asked to evaluate the degree to which they agreed or disagreed with the following sentence:

(C) Superman went into the phone booth and Clark Kent came out at  
11:15 AM on August 8<sup>th</sup>, 1991.

Again, participants were given a five-level Likert scale to choose from when evaluating (C). Each level of the Likert scale was assigned a value: Strongly Disagree was assigned



0, Somewhat Disagree was assigned 1, Neutral was assigned 2, Somewhat Agree was assigned 3, and Strongly Agree was assigned 4.

### **Section 1.1: Experiment 1: The Results**

There were 50 participants for each survey, recruited from Amazon Mechanical Turk to fill out one of the two short SurveyMonkey surveys\*. As predicted, in the surveys where the participants were asked to evaluate the degree to which they agree or disagree with “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991” when given both “Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8<sup>th</sup>, 1991” and “Superman is Clark Kent”, the participants agreed with the sentence (mean of 2.96). The difference between this survey and the first survey, the survey in which participants were asked to evaluate the degree to which they agree or disagree with the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991” but were not given the identity statement “Superman is Clark Kent,” is statistically significant ( $p = 0.0072$ ).

Now I will give a brief analysis of how the data of this second experiment and the difference between the first and second experiments affects Saul’s thesis. Recall that when Saul was laying out the possibility of conducting experimental research regarding simple sentence intuitions she consider the possibility that anti-substitution intuitions may hold in experiments where subjects are not explicitly given the identity statement, but may not hold in experiments where subjects are explicitly given the identity statement. In this scenario, Saul says, we only need the explanation of why these anti-substitution intuitions take place in the first place. This is because, in such a scenario, anti-substitution intuitions occur but are not stringent. This is indeed the scenario that seems

to be the actual case. It is important to note here the results of the first experiment. Experiment one is the experiment in which subjects are given “Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8<sup>th</sup>, 1991” but are not given the identity statement, and are asked to evaluate the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991”. The mean of this experiment was 2.14. The reason this is important to note is because 2.14 accords with being Neutral-level on the Likert scale, not disagree as Saul suggests that participants will answer in such an experiment.

Though the experiment shows that Saul is not necessarily correct in claiming that the majority of people have the intuition that it is false that Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991, the results do not conclusively show that the majority of people have the intuition that it is true that Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991, at least not when they not explicitly given the identity statement. What is most interesting about this particular experiment is the fact that there is a statistically significant difference between the degree to which people agree with the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991” when they are given the identity statement “Superman is Clark Kent” and when they are not given the identity statement. This result is in need of explaining.

## **Section 2: Experiment 2: The Method**

The method of this experiment was to give four separate surveys to four separate sets of participants\*. In the first and second surveys participants were given the following blame-condition vignette:

“Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Instead of saving the boy, however, Superman watched the boy fall to his grizzly death, despite having the ability to save him.”

In the first survey participants were asked to what degree they agree or disagree with the following sentence:

(16) Clark is morally blameworthy for letting the boy fall to his death.

In the second survey participants were asked to what degree they agree or disagree with the following sentence:

(17) Superman is morally blameworthy for letting the boy fall to his death.

In the third and fourth surveys participants were given the following praise-worthy vignette:

“Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Noticing that the little boy fell off, Superman swiftly jumps into action and flies to the boys rescue, saving the boy from certain death.”

In the third survey participants were asked to what degree they agree or disagree with the following sentence:

(18) Clark is morally praiseworthy for saving the boy.

In the fourth survey participants were asked to what degree they agree or disagree with the following sentence:

(19) Superman is morally praiseworthy for saving the boy.

As was the case in the first experiment, the participants were given a five-level Likert scale to pick from when answering the blameworthy/praiseworthy questions: Strongly Disagree was assigned 0, Somewhat Disagree was assigned 1, Neutral was assigned 2, Somewhat Agree was assigned 3, and Strongly Agree was assigned 4.

### **Section 2.1: Experiment 2: The Results**

As was the case in the first experiment, there were 50 participants assigned to each survey who were recruited through Amazon Mechanical Turk and participated in the surveys through SurveyMonkey\*. Given that in this survey participants were given a vignette that explicitly states that Superman goes by the name of Clark in order to work his day job at a newspaper, and given the results of experiment 1, one would expect that there would be no statistically significant difference between survey one and survey two, and that there would also be no statistically significant difference between survey three and survey four. This is because if participants are told that Superman and Clark are one and the same person, the participants should not assign different levels of blameworthiness/praiseworthiness to Superman and Clark according to the results of the first experiment. This is because in being told that Superman and Clark are one and the same person, we are explicitly giving the participants the identity statement. Indeed, this is exactly what happened. Surveys one and two yielded no statistically significant difference ( $p=0.24$ ) and surveys three and four yielded no statistically significant difference ( $p=0.46$ ).

In what follows, I will go through each of the theories that set out to explain anti-substitution intuitions and see how each theory might account for the results of these two

experiments. I will start by assuming that Saul is correct that anti-substitution intuitions do occur in conditions where the subjects are not explicitly given the identity statement, but is incorrect that anti-substitution intuitions occur in conditions where the subjects are explicitly given the identity statement. The purpose of this approach is to see how each theory can explain the statistically significant difference between the two conditions in the first experiment and the lack of a statistically significant difference between surveys three and four and between surveys five and six. I will then consider how each theory can explain the near 50-50 divide in the first survey in experiment 1 in which the identity statement was not given.

## CHAPTER 4

### HOW THE THEORIES WOULD EXPLAIN THE EXPERIMENTAL DATA

#### **Section 1: How Pitt's Alter Ego Theory Would Explain the Experimental Data**

In Pitt's alter ego theory, Pitt puts forward the thesis that the reason we have anti-substitution intuitions regarding simple sentences is because we think of 'Superman' and 'Clark Kent' referring to two different collections of temporal parts of an individual. Pitt's view may be able to accord with the data by claiming that people are naturally inclined to think of the collections of temporal parts of an individual who has multiple egos, but that natural way of thinking can be broken when explicitly being given the identity statement. This would be the case, on this account, because by explicitly providing the participants with the identity statement, we are in effect forcing them to quit thinking about the two separate collections of temporal parts of the same individual and instead think about the individual himself.

However, though it seems like Pitt's view could accord with the data in this way, we must take into account what Pitt ultimately wants to claim about anti-substitution intuitions in simple sentences. As Pitt's view is a semantic view, Pitt wants to claim that sentences such as (1) are in fact true even though sentences such as (1\*) are in fact false. Applying this to our survey sentences, Pitt would want to claim that though the sentence "Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8<sup>th</sup>, 1991" is true, the sentence "Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991" is false. The problem for Pitt is that though he could give us an adequate account of why the results show that participants have the intuition that "Superman went into the phone booth and Clark Kent came out at 11:15

AM on August 8<sup>th</sup>, 1991” is true when we give the participants the identity statement but the results are very close to neutral when we do not give them the identity statement, he cannot explain why the results are very close to neutral in the first experiment as opposed to being in the ‘false’ range.

This is because any semantic view would want to claim that “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991” is false when we do not give the identity statement, because ‘Superman’ and ‘Clark Kent’ are referring to two different alter egos of the same individual, and it is not true that the ‘Superman’ ego went into the phone booth at 11:15 AM on August 8<sup>th</sup>, 1991, only the ‘Clark Kent’ ego went into the phone booth at 11:15 AM on August 8<sup>th</sup>, 1991. This does not accord with the data because one would expect, on this view, participants to have responded in the ‘somewhat disagree’ or ‘strongly disagree’ range, but instead it was close to a 50-50 split. Therefore, it seems that Pitt’s view cannot explain the data in a clear and consistent way.

## **Section 2: How Moore’s Aspect Theory Would Explain the Experimental Data**

In Moore’s aspect theory, Moore puts forward the thesis that there are ‘aspects’ of individuals that have co-referential names. These ‘aspects’ are collections of *properties* (rather than collections of temporal parts) that are associated with each respective name. This view can accord with the data in a way very similar to that of Pitt’s temporal parts view, in that it would claim that it is natural for people to think of two different co-referential names as referring to collections of properties of the individual that are associated with a particular name, but by explicitly giving the participants the identity statement in the second survey we are in effect making them focus on the individual

himself instead of focusing on the collections of properties that are associated with a particular name.

However, as was the case with Pitt's view, Moore's aspect theory cannot explain the results in the first experiment. This is because Moore's aspect theory is a semantic theory, and as already stated, semantic theories would predict that the majority of participants would respond in the range of 'somewhat disagree' to 'strongly disagree', whereas what actually happened was that participants were close to a 50-50 split. Furthermore, if it were the case that what participants were referring to (or thought we were referring to) was aspects of an individual, we would have expected that in the second survey participants would have been very confused by the our instructions to assume that "Superman is Clark Kent" is true, because if it was natural for participants to think of 'Superman' and 'Clark Kent' as referring to two different aspects of the same individual, it would seem odd to them to claim that "Superman is Clark Kent" is true. Therefore, Moore's view cannot adequately explain the data.

### **Section 3: How Forbes' Modes of Personification Theory Would Explain the Experimental Data**

In his theory, Forbes offers us an explanation for anti-substitution intuitions that deals with what he calls 'modes of personification'. For Forbes, modes of personification are ways in which an individual can be labeled by others. This account can accord with the data in much the same way as Pitt's and Moore's views can be made to accord with the data. That is, Forbes could claim that though in the first survey we are allowing the participants to use their own labels for the individual, but in the second survey we are



instead forcing the participants to think of not the labels that they have for the individual, but instead to think of what is literally the case.

However, as was the case with Pitt's and Moore's views, since Forbes' view is a semantic view, it cannot explain the data of our experiments.

#### **Section 4: How Predelli's View Would Explain the Experimental Data**

On Predelli's view, what matters with intuitions concerning simple sentences such as "Superman leaps more tall buildings than Clark Kent" is the context in which the sentence is uttered. In some instances, what Predelli calls "simple occasions", the sentence will be referring to 'Superman/Clark Kent' twice over, so the sentence would actually be meant as the following:

"Superman/Clark Kent leaps more tall buildings than Superman/Clark Kent"

In other instances, what Predelli calls "sensitive occasions", the names 'Superman' and 'Clark Kent' will make the two different personae of the individual salient.

In order for Predelli's view to account for the data, he would have to claim that the natural default occasion is the sensitive occasion, and by making the identity salient in the second survey we are changing the occasion to a simple occasion. Unfortunately for Predelli, the claim that the natural default occasion is the sensitive occasion is not supported by the experimental evidence. This is because if the natural default occasion were to be the sensitive occasion, one would expect that the majority of participants would have responded with 'somewhat disagree' or 'strongly disagree' in the first survey, but instead what happened is that the participants were nearly evenly split. So, it seems that Predelli's view is not one that adequately explains the experimental evidence.

Furthermore, even if Predelli's view did not have this problem, it would still be subject to

the same problem as the other semantic accounts, in that it would not be able to explain the data.

### **Section 5: How Barber's View Would Explain the Experimental Data**

On Barber's view, we may be able to explain why someone might think that sentences such as (1) are true even though they are in fact false. The explanation is that conversational implicatures tend to be at play in these types of sentences. So, applying this theory to our surveys, Barber would claim that the reason participants might think "Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991" is false even though (as we stipulated) "Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8<sup>th</sup>, 1991" because what is being captured in these sentences are:

(20) Superman/Clark Kent, when Clark Kentizing, went into the phone booth and Superman/Clark Kent, when Supermanizing, came out at 11:15 AM on August 8<sup>th</sup>, 1991.

(21) Superman/Clark Kent, when Supermanizing, went into the phone booth and Superman/Clark Kent, when Clark Kentizing, came out at 11:15 AM on August 8<sup>th</sup>, 1991.

Barber's view may be able to explain the data because though implicature may be occurring in the first survey, it cannot possibly be occurring in the second survey because by providing the identity statement we are making clear that we are talking about the individual that 'Superman' and 'Clark Kent' refer to, not the way the individual presents himself when using these two different names. Therefore, Barber's view would predict that participants would claim that "Superman went into the phone booth and Clark Kent

came out at 11:15 AM on August 8<sup>th</sup>, 1991” is true because by providing the identity statement we are making clear that we are asking a question about the individual, not about what may be implied by using the individual’s two names.

This view has the added benefit of explaining why the results are close to neutral in the first survey as opposed to being in the ‘Somewhat disagree’ to ‘Strongly disagree’ range. This is because on this view it is possible that while some participants are picking up on the implicature that is captured by (21) in “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991”, some participants are not picking up on the implicature and are thus giving the same literal translation that is made salient in the second survey when we give the participants the identity statement.

Furthermore, Barber’s view has the benefit that, because it is a pragmatic view, it does not face the same problems as Pitt, Forbes, and Moore had when explaining the data. This is because while semantic views attempt to maintain the truth of sentences such as (1) (and therefore the falsity of the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991”), pragmatic views do not attempt to maintain such truth. In fact, pragmatic views claim that sentences such as (1) are literally false (and therefore claim that the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991” is literally true).

### **Section 6: How Naïve Implicature Views Would Explain the Experimental Data**

Naïve implicature views can explain the results of these surveys in the exact same way as Barber’s implicature view. Recall that the big difference between Barber’s view and naïve implicature views is that Barber’s view requires there to be a difference in truth

value between sentences such as (13) and (13\*), whereas naïve implicature views require them to have the same truth value:

(13) Lois believes that Superman is the semantic value of ‘Superman’.

(13\*) Lois believes that Clark is the semantic value of ‘Superman’.

It seems obvious that (13) and (13\*) must have different truth values, and therefore it seems that Barber’s implicature view is stronger than the naïve implicature views.

### **Section 7: How Sperber and Wilson’s View would Explain the Experimental Data**

Sperber and Wilson’s view would explain the data in much the same way as Barber’s view. The added benefit to their view, however, is that they stray away from typical Gricean implicatures in that they neither assume nor require that Grice’s three conditions for conversational implicatures are necessary. All that is needed for Sperber and Wilson’s view is that any assumption that is communicated but not explicitly communicated is implicitly communicated. However, this benefit comes at a great cost when it comes to explaining the data in that it requires that the audience must grasp the implicature in order for a proposition to be implicated. This is a problem for their view because it seems like in the first survey a proposition is being implicated in some instances but is not being implicated in other instances, because some participants grasp the implicature and others do not. This is a big problem for Sperber and Wilson, because a proposition cannot both be implicated and not implicated. Therefore, it seems that Sperber and Wilson’s implicature view cannot explain the data.

### **Section 8: How Davis’s View Would Explain the Experimental Data**

Davis’s view cannot explain the data, because his view the only meaning that matters is the speaker’s. However, what is meant by us when we write the sentences

down in the surveys is not what matters. What we are trying to gauge *just is* the audience's interpretation of the sentences. But Davis' view says that the audience's interpretation does not matter. Therefore, Davis's view would not even attempt to explain the experimental data, because on his view the experimental data is irrelevant.

### **Section 9: How Bach's View Would Explain the Experimental Data**

Bach's view does not face the same problem that Davis's view does, as it seems that Bach is giving us a view that looks at the way an audience might interpret a speaker, as opposed to focusing on what the speaker means. Bach's view makes use of what he calls conversational *implicatures*, in which there is a sort of standard or "typical" meaning of a sentence that makes the sentence appear true even though it is false on a literal interpretation (or vice versa). However, this provides a problem for Bach's view when it comes to explaining the data, because if there was a sort of "typical" meaning of a sentence that makes the sentence appear false even though it is literally true (as would have to be the case in the sentence "Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991"), one would expect that the results of the first survey would have shown participants to be in the 'somewhat disagree' to 'strongly disagree' range as opposed to being close to neutral. Therefore, it seems like Bach's implicature/implicature view cannot adequately explain the experimental data.

### **Section 10: How Soames's View Would Explain the Experimental Data**

On Soames's view, propositions other than those that are semantically expressed or implicated can explain our anti-substitution intuitions about simple sentences. On this view, our intuitions may be due to what is asserted. Soames claims that assertion is something different from semantic content. For example, consider again (1):

(1) Superman leaps more tall buildings than Clark Kent does.

In this sentence, Soames maintains that the semantic content just is the leaping-more-tall-buildings-than relation between Superman and Clark Kent. He also thinks that any given utterance of (1) could assert the following:

(1S) Superman, the Man of Steel, leaps more tall buildings than Clark Kent, the bespectacled reporter, does.

Furthermore, Soames thinks that the semantic content of that assertion is what is meant when the sentence is uttered.

Soames's view, however, cannot explain the experimental data. The reason Soames's view cannot explain the experimental data is because his view relies on an assertion being made by the speaker and then being interpreted by the audience. This is a problem because, when creating the sentences for the surveys and distributing the surveys to participants, I did not intend to assert anything like (1S), I simply intended for the readers to make a judgment about the semantic content of the sentence as it was written. As Soames's view states, in order to assert something like (1S) by uttering (1), I must *intend* to assert something like (1S) and I also must reasonably think that the participants would judge that I am asserting (1S) by uttering (1).

### **Section 11: How Saul's View Would Explain the Data**

Jennifer Saul's view is that we have separate 'nodes' that are connected with each name (though she does not think this is necessary, nodes can also be connected with descriptions) of an individual. When it is discovered by an individual that two names co-refer, the two nodes that are connected with the two names do not integrate, rather they link and share information. Saul's view predicts that the majority of people will say that

sentences such as (1) are true, and the reason it predicts this is that people tend to keep the information between two nodes separate unless they are presented with some good reason to share information between them. Saul would explain the difference in outcome between the two surveys because she can claim that in the second survey, by presenting participants with the identity statement we are in effect giving them good reason to share information between the two nodes.

However, is this really a good explanation for why participants in the second survey respond between “somewhat agree” and “strongly agree”? In order for her theory to explain the results, Saul would have to claim that by giving the participants the identity statement explicitly, we are in effect giving them good reason to share information between the two nodes. Sure, it may be true that by giving the identity statement to *unenlightened* individuals we would be giving good reason to share information between the two nodes, because if we were to give the identity statement to unenlightened individuals we would be giving them information that they did not have before, namely that ‘Superman’ and ‘Clark Kent’ refer to the same individual. But this does not seem to be what is going on in the case of enlightened individuals. This is because when we give enlightened individuals the identity statement we are not telling them some new information, we are simply re-stating something they already knew. In order for her theory to explain the data, Saul would have to give a plausible account of what good reasons to integrate information we are giving participants simply by explicitly stating the identity statement.

On a different note, it may be difficult to see how Saul’s view can explain the results in the initial survey, the survey in which participants are not explicitly given the

identity statement. Recall that the results in the initial survey were split close to 50-50, with about half of the participants in the ‘somewhat disagree’ to ‘strongly disagree’ range and about half of the participants in the ‘somewhat agree’ to ‘strongly agree’ range. Saul claims that “In the case of double lives, like Superman/Clark, it would seem natural for us to go out of our way to avoid integrating information from the different nodes most of the time. It would make sense for our default to be keeping such information separate” (Saul 135). However, contrary to Saul’s claim that it would make sense for our default to be keeping information separate, this does not seem to be what the results show. The results show a conflict of intuitions. If it were the default to keep the information separate, it would seem that the results in the first survey would have been in the ‘somewhat disagree’ to ‘strongly disagree’ range, and it would seem that the results in the second survey would have been closer to neutral, if not in the ‘somewhat disagree’ to ‘strongly disagree’ range. That is, it seems like the results in the first survey would have been more much more consistent, favoring the ‘somewhat disagree’ to ‘strongly disagree’ end of the spectrum, and that the results in the second survey would have been at least less consistent (and therefore close to neutral) if not consistent in the ‘somewhat disagree’ to ‘strongly disagree’ range. However, as already shown, the reverse is what happens.

Saul’s view does allow that some people may integrate information (or at least share and make inferences between nodes) more quickly than others, and even offers potential reasons this may be the case. She says that there may be many reasons, but offers the following two: habit and/or good reason. Again, good reason might (or might not) explain why participants in the second condition seem to integrate information more



quickly (assuming that the information is stored in nodes, as Saul suggests they are), because by giving them the identity statement we are giving them such a good reason. However, it seems that neither habit nor good reason would explain why almost exactly half of the participants would integrate information and the other half would not. This is because it seems unlikely that almost exactly half of the participants would have a good reason to integrate or a habit of integrating, while almost exactly half of the participants do not have a good reason or habit of integrating. I will now give an assessment of the two views that I think are the greatest contenders in the debate of how to account for anti-substitution intuitions in simple sentences involving co-referential names: Barber's implicature view and Saul's node view.

## CHAPTER 5

### SAUL'S VIEW VS. BARBER'S VIEW

As already argued, Barber's implicature view has several potential benefits in explaining anti-substitution intuitions in simple sentences involving co-referential names. One benefit is that, since it is a pragmatic view rather than a semantic view, it maintains that intuitions that sentences such as "Superman leaps more tall buildings than Clark Kent" are true are in some way misguided, because these types of sentences are literally false. Another benefit is that it may be able to explain the data of both experiments. Barber's view may be able to explain the results of the second experiment because in the second survey there is no implicature because we are making salient the identity by giving the participants "Superman is Clark Kent", and therefore predicts that participants will claim that "Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991" is true. His view can explain the results of the first experiment because even though some participants might think there is an implicature, it may not be the case that all of the participants think there is an implicature. This explains why there is close to a 50-50 split between participant responses in the first experiment.

There are also several benefits to Saul's view. The first benefit is that, by being a purely psychological view, it needn't make claims as to whether or not sentences such as "Superman leaps more tall buildings than Clark Kent" are true or false. This is because, as a psychological view it only needs to explain reasons why people may have intuitions one way or the other. Saul's view can also explain the intuitions of the few participants that responded in the 'somewhat disagree' to 'strongly disagree' range on the second survey. This is because her view sets out to explain this result by saying that participants

who respond in this range do so because they have good reason not to share information between the ‘Superman’ and ‘Clark Kent’ nodes, but still allows for the possibility that the majority of participants lack such a good reason and are thus compelled by the identity statement to agree with the sentence “Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8<sup>th</sup>, 1991”.

However, as already noted, it does not seem that Saul’s view is in a good position to explain why the majority of participants in the second experiment answered in the range of “somewhat agree” to “strongly agree”. This is because Saul claims that we only integrate information when we have very good reason to do so, and it is not clear what a good reason would be for these participants to have answered the way that they did. Furthermore, Saul claims that we always have good reason to not integrate information, so it seems that the good reason participants would have to have to integrate information would have to not only be good reasons on their own, they have to be in fact *better* than the good reasons we have for not integrating. If we indeed have good reasons for not integrating we would expect the participants in the second survey to still be reluctant to agree with the sentence. But, as already shown by the results, once people are given the identity statement they are not very reluctant to agree with the sentence.

Saul’s view also does not seem to be in as good of a position as Barber’s to explain the results of the first experiment. This is because Saul’s view does not offer a clear and concise explanation for why there is nearly a 50-50 split in the results between the ‘somewhat disagree’ to ‘strongly disagree’ range and the ‘somewhat agree’ to ‘strongly agree’ range, while Barber’s view does offer an at least somewhat cleaner explanation for the split. Saul’s view does not offer a clear and concise explanation of the

split because she states that some people may integrate information between nodes more quickly than others, and two possible reasons this might be the case are habit and reason (though there may be others as well). With just these two possibilities (and no more, as Saul claims there are many of) a difficulty already arises. The difficulty is to give an account which of reason explains the only-slightly-more-than-fifty-percent of participants that gave a response in the ‘somewhat agree’ to ‘strongly agree’ range. Is it habit, or is it good reason that makes these participants quicker at integrating the information between the two nodes, or is it both? Barber’s view, on the other hand, can explain the near 50-50 split more simply because on his view participants may fail to think that there is an implicature “Superman, when Supermanizing, went into the phone booth and Superman, when Clark Kentizing, came out at 11:15 AM on August 8<sup>th</sup>, 1991” from the original sentence.

It could be objected that Barber’s view does not explain *why* it might be that half of participants might fail to think that there is an implicature while the other half does think there is an implicature. However, it seems like there are two ways that are open to Barber of explaining why there is a near 50-50 split in the first survey. The first way is that Barber could claim that the natural way of thinking about the sentence is to think of its literal meaning, and thus would need to explain why it is that participants who think there is an implicature in the sentence fail to realize that we are asking about the literal meaning of the sentence. The second way is that Barber could claim that in cases where participants are not given the identity statement, the natural way of thinking about the sentences is to think of what the sentence implicates, and thus Barber would need to

explain why participants who take the literal meaning of the sentence do so when they should be thinking about the implicature.

So, where does this leave us in the debate of which view can best explain anti-substitution intuitions about simple sentences that contain co-referential names? It seems that the experimental results of these two surveys at the very least reopens the possibility that Barber's implicature provides the best explanation and thus gives us a (potentially) viable alternative to Saul's psychological theory.

Here I would like to take a moment to point out that it seems as though Saul believes that her theory *necessarily* conflicts with the theories that she sets out to argue against in her book. However, upon closer evaluation, this does not seem to be the case. It seems that, for example, someone's explanation for having an anti-substitution intuition regarding sentences such as "Superman went into the phone booth at 11:15 AM on August 8<sup>th</sup>, 1991" might be that Clark Kent is the alter ego of Superman. In this case, it seems like the person in question is not integrating information, and it seems like they have a good reason to do so. Here we must not confuse 'alter ego' to mean something similar to what Pitt suggests. We do not here want to think of 'Clark Kent' and 'Superman' as referring to different temporal parts of the same individual, for the reasons that Moore provided in arguing against temporal part views.

There is, of course, a fairly straightforward way to assess how people are actually thinking about these sentences when they do have these anti-substitution intuitions. We could simply ask participants why they responded the way they did. Similarly, we could ask participants to put themselves in the position of someone who would disagree with sentences such as "Superman went into the phone booth at 11:15 AM on August 8<sup>th</sup>,

1991” and ask them to think about why they might disagree. My inclination is that they might respond in one of two ways: they may respond somewhere along the lines of “because Clark Kent and Superman are two different people, so it would be impossible that they would both go into the phone booth and come out at the same time”. Or they may respond by saying something along the lines of “because Clark Kent is the alter ego of Superman” or by saying something like “the persona that entered the phone booth was Clark Kent, not Superman”.

How should we interpret such results? Well, for those who would respond along the lines of “because Clark Kent and Superman are two different people, so it would be impossible that they both go into the phone booth and come out at the same time”, we should think that these people are, as Saul would call them, unenlightened individuals. It seems that people who have this response either have not much (if any) knowledge of the Superman stories, or that they are fundamentally lacking in what the story entails. If, on the other hand, someone responded along the lines of “because Clark Kent is the alter ego of Superman”, we should interpret this as thinking that the names ‘Clark Kent’ and ‘Superman’ refer to ways of thinking about an individual rather than the individual itself.

We should not, however, interpret this layperson’s alter ego claim in the way that Pitt would. That is, we should not think that the layperson’s conception of an alter ego has anything to do with temporal parts. This is because it seems that when confronted with a scenario such as the one Moore uses to defeat temporal parts views, the layperson would still claim that there are two ‘alter egos’ present, just that they are now present at the same time. Reconsider Moore’s scenario:

Lois is talking on the phone with Superman, but is looking through the window at Clark Kent.

It seems that in this situation the layperson would claim that the individual that has the names 'Superman' and 'Clark Kent' associated with him is portraying himself as Superman on the phone, but is portraying himself as Clark Kent in person. This does not seem like such a bizarre way of talking about this situation. In fact, it seems perfectly. For if Lois were to watch Superman/Clark Kent closely, she would most likely notice that the words coming out of the mouth of the person she thinks to be Clark Kent (but not Superman) are the same as the words that she is hearing in the phone coming from who she thinks to be Superman (but not Clark Kent), and then would most likely go and yell at Clark for prank calling her and making her think that Superman was the one she was talking to all along. Similarly, if one of Superman/Clark Kent's office buddies were to overhear him talking to Lois as Superman, he might think that this was a really funny joke for Clark to be playing on Lois. However, the layperson, being an external observer, would know that what is really going on is that there are two ways the individual that 'Superman' and 'Clark Kent' refer to can present himself, and it is even possible for that individual to present himself in both ways, namely by using different means of communicating. While talking on the phone, this individual can portray himself as Superman to whomever he is talking to, while at the very same time he can portray himself as Clark Kent to anyone who is viewing the individual in person.

What this individual cannot do without giving up these two 'alter egos', 'persona', 'modes of presentation', or whatever one chooses to call the ways this individual presents himself to the public, is appear in any particular mode as both

Superman and Clark Kent. For if, while talking on the phone to Lois, this individual revealed that he was Clark Kent, he would most likely end up making Lois angry for either pranking her or worse, lying to her and trying to get her to believe that he (the shy and nerdy Clark Kent) is even remotely close to being as strong and sexy as the heroic Superman. Similarly, if while at *The Daily Planet* this individual were to suddenly take off the business attire he wears while portraying himself as Clark Kent and fly out the window in his iconic Superman tights-and-cape ensemble, his co-workers would finally come to realize that Clark Kent really just is the secret identity of Superman.

In this case, it seems like Barber's view is still the one that has the least amount of kinks in it, and it does a decent job of getting across this important point. Saul seems to believe that her view is incompatible with Barber's because she thinks that there are two fundamental flaws with Barber's view, namely the aspect problem and the enlightenment problem. However, if we were somehow to avoid both of these problems, it does not seem that Saul would have to give in and say that her theory is wrong. It seems that instead we could simply take on a compatibilist/hybrid theory and say that Barber's theory gives us a more detailed picture of what is actually going on in the heads of those who have anti-substitution responses to these types of questions.

The goal here should be to see if the enlightenment problem and the aspect problem can be dealt with, and if they can be leave it up to the reader to decide for him/herself which view has the most plausibility. If I can show that the enlightenment and aspect problems can be adequately dealt with, there will then be three options open to the reader:



Option 1: Still claim that Saul's view is correct, because it does not require the enlightenment and aspect problems to be explained, even if they can be.

Option 2: Claim that Barber's view is correct, because it explains the experimental evidence better than Saul's view.

Option 3: Adopt a sort of hybrid view between Barber and Saul's views.

This view would say that though Saul is correct in claiming that we should look at what is going on, cognitively speaking, in people who have these anti-substitution intuitions, but would also say that what is going on is that these people have a good reason not to integrate Superman and Clark Kent information, and that reason just is that they think of 'Superman' and 'Clark Kent' as being ways of associating different ways the individual these two names presents himself in different contexts.

So, can the enlightenment and aspect problems be adequately explained/dealt with? It seems that they can.

Recall that for Saul, the enlightenment problem is that regardless of whether or not a conversational participant is enlightened or unenlightened, *our* intuitions regarding substitution in simple sentences do not seem to change. That is, we could accept that the unenlightened Lois believes that (1) is true, but this should not have any influence on *our* intuitions about the truth-value of (1). We should nonetheless have the intuition that (1) is false, and say that the reason Lois (wrongly) claims that (1) is true is because she is unenlightened. But Saul thinks that this is not what happens. She thinks that the majority of us, like Lois, would claim that (1) is true, despite the majority of us being enlightened.

This premise is necessary for the enlightenment problem to arise. However, there is little evidence that the majority of us would claim that (1) is true despite being enlightened. In fact, at minimum the evidence shows that there is a great divide in the intuitions of ordinary people, almost exactly 50-50. But if we were to dig a little bit deeper and try to understand why someone might have these anti-substitution intuitions, it seems natural to think that we might get two types of general responses. The first is that ‘Superman’ and ‘Clark Kent’ do not refer to the same person. In this case, we should conclude that the participant is unenlightened, and thus should expect the participant to respond in this way. The second is that ‘Superman’ and ‘Clark Kent’ refer to two different ways that the individual that these two names refer to can present himself. In this case, we should conclude that the participant is enlightened, but is thinking about the sentence as referring to ways that the individual presents himself, which is somewhere along the lines of Barber’s thesis.

However, this is just speculation, and in order to gain evidence for this view more experimental data should be provided. One way this theory could be tested is by simply asking participants why they answered the target question the way they did. The analysis, of course, would need to focus on participants whose answers are taken to show that the participants are having anti-substitution intuitions.

Now, does it seem that we can explain away the aspect problem, at least when it comes to its being a problem for Barber’s view? It seems that we can. Barber seems to make it fairly clear what it means for one to “Supermanize” and for one to “Clark Kentize”. For one to Supermanize, one must present oneself in such a way that an external observer would say something to the effect of “hey, look, there’s Superman!”

Similarly, for one to Clark Kentize, one must present oneself in such a way that an external observer would say something to the effect of “hey, look, there’s Clark Kent”. This could mean different things for different people, as Saul has pointed out previously in her case of Alfred and Betty, but this does not actually seem to be a difficult problem for Barber to address. Recall that the case of Alfred and Betty is one in which Alfred does not think that Superman wore a cape, but Betty does think that Superman wore a cape. Saul claims that her case is one in which Alfred and Betty have different views on what it means for Superman/Clark Kent to Supermanize. But it seems that on Barber’s view we would not say that Betty must be right because in order for Superman/Clark Kent to Supermanize he must wear a cape. Instead it seems that we would say that Superman/Clark Kent is Supermanizing regardless of whether he is wearing a cape or not. This is because the act of Supermanizing is a complex state of meeting a *majority of essential criteria*. So, because the cape is not essential to Supermanizing, we need take a stance on whether or not Superman/Clark Kent is Supermanizing when he is not wearing a cape. In fact, the creators of the Superman stories could have created Superman/Clark Kent such that he never wore the classic tights with the Superman logo, but instead simply wore a plain white undershirt and some basketball shorts when he was Supermanizing. This would have not changed what it means to Supermanize, because the essential characteristics of what it is to Supermanize are the things that are absolutely essential to the character, namely that he is from Krypton, can do extraordinary things (such as fly and move extremely heavy objects), and uses his extraordinary abilities to save people from harm. Furthermore, it seems silly to suggest that if Alfred were to insist on watching one of the films in which Superman does not wear tights and a cape that,

during the film, Betty would say something like “that’s not Superman. Superman wears a cape, and that guy isn’t wearing a cape, therefore that is not Superman.” Instead, we could imagine Betty saying something like “hmmm, that’s interesting, the makers of this film chose to have Superman not wear a cape. I wonder what their reason was for that.”

An interesting consequence of Barber’s view is that it seems like someone who is not Superman could in fact “Supermanize”. This does not seem to be a vice of Barber’s view, but seems to be yet another virtue. For this seems to allow me to, when explaining to my young cousins that there is no such actual person as Superman, say of Henry Cavill that in one scene of the movie he is Supermanizing, but in a different scene he is Clark Kentizing, for it is never the case that Henry Cavill *actually is* Superman/Clark Kent.

Now, let’s for a moment assume that my arguments against the enlightenment and aspect problems are sound. Now it comes back to the question of which of the three options I presented earlier in this section best fits the experimental data. It seems that the option that best explains the experimental data is option 3, which says that we should adopt a sort of hybrid view of Saul’s view and Barber’s view. It says that what matters in cases of people having anti-substitution intuitions is that these people have some sort of good reason not to integrate information about Superman/Clark Kent, and that good reason is that for Superman/Clark Kent to Supermanize is something different from what it is for Superman/Clark Kent to Clark Kentize. Whether someone says that Superman/Clark Kent is Superman versus saying Superman/Clark Kent is Clark Kent depends on whether or not Superman/Clark Kent is Supermanizing or Clark Kentizing, and that will depend on the context in which Superman/Clark Kent is presenting himself.

Indeed, this seems to be a good way of interpreting Barber, considering the following quote from his paper “A Pragmatic Treatment of Simple Sentences”:

“These and other imagined situations fail to undermine the claim that to Supermanize is to appear as Superman. They show only that who it is to whom the Supermanizer is taken to be so appearing can vary according to context, often with subtle twists.” (Barber 306)

## CHAPTER 6

### LIMITS OF THE EXPERIMENTAL RESULTS AND SUGGESTIONS

I have already given one suggestion of further experiments that could be done to give support for Barber's thesis, or at least a hybrid of his and Saul's views. Now I would like to acknowledge the limits of my experiments and their results and make some further suggestions for future studies that could provide a more complete picture of anti-substitution intuitions in simple sentences.

First one might wonder if, by telling the participants to "assume that the Superman stories are true", I am in effect forcing the participants to put themselves in some sort of pretense that is confusing to the participants. This is because it may seem unclear what I mean when I say "assume that the Superman stories are true"; because there are multiple positions that one could imagine oneself to be in if the Superman stories were true in the actual world. One could imagine that they are just an ordinary street observer who may have no idea who Clark Kent is, but has seen the news stories about Superman. Or one could imagine that they are in the position of someone who is "in the know", but is not allowed to talk about it in order to preserve Clark's/Superman's secret. Or one could even imagine that they are Lex Luthor, Superman's arch nemesis, and be "in the know" and have great incentive to tell the world that Clark Kent is Superman. Another worry might be that there is a significant disparity between cases of fictitious co-referential names and real-life cases of co-referential names such that the simple sentence substitution intuitions would be vastly different between the two.

In order to test both of these worries we could do a study where we ask participants to evaluate sentences involving substitution of co-referential names in real-

life cases. This would address the worry that by telling participants to assume that the stories are true we are forcing to put themselves in some sort of pretense, because we would be giving them a real-world scenario that is actually true so no pretense is needed. However, in order to address the worry that there would be a disparity between fictitious cases and real-life cases we must provide a real-life case in which different (and perhaps even contradictory) descriptions/bits of information are associated with the two different names.

Of course, this is easier said than done, as there are other worries that accompany the common real-world scenarios. For example, it may not be very beneficial to use examples such as ‘Hesperus’ and ‘Phosphorus’, ‘Mark Twain’ and ‘Samuel Clemens’, or ‘St. Petersburg’ and ‘Leningrad’, because it seems likely that at least a significant portion of participants would have no idea who or what those names refer to, and thus would be disposed to say give results that would show that people have anti-substitution intuitions. But the worry would be that participants would be having these intuitions because they are unenlightened to the fact that ‘Hesperus’ and ‘Phosphorus’ co-refer (and the same goes for ‘Samuel Clemens’ and ‘Mark Twain’, as well as ‘St. Petersburg’ and ‘Leningrad’). Furthermore, the most common examples of celebrities most likely will not work, as it seems like most of the examples are such that an individual only takes on two different names, but do not have different characteristics associated with those names. For example, at first glance one might think that ‘Puff Daddy’ and ‘Sean Combs’ would be a good set of co-referential names to use in a real-life case, but upon deeper thinking it becomes clear that ‘Puff Daddy’ is simply a name that the rapper Sean Combs gave himself to be able to promote his music. The worry is that people would still associate

‘Sean Combs’ with being a rapper who goes by the name ‘Puff Daddy’ when he is in the limelight, while they would associate someone who has extraordinary powers with ‘Superman’ and someone who does not have extraordinary powers with ‘Clark Kent’.

However, there do seem to be cases in which an individual has some sort of alias, and even others who were acquainted with this individual were surprised to find out that this individual is the same individual whom the alias refers to. A really recent example would be ‘Dzhokar Tsarnaev’ and ‘The Boston Bomber’. This seems like a potential good example because, as the popular media has reported, many of the acquaintances of Dzhokar Tsarnaev thought he was an extremely nice, funny guy who loved being in America, and were shocked to learn that he was capable of doing such horrendous acts. Surely there must be other examples that could be used for experiments, but it is important for those who carry out the experiments to keep in mind that the co-referential names must have the unique feature of being associated with different characteristics of the individual.

If it turned out that the participants of such an experiment largely do not have these anti-substitution intuitions, then it would seem that anti-substitution intuitions are a special feature of fictitious cases. This result would thus produce the interesting need for an explanation as to why this occurs in fictitious cases and does not occur in real-life cases, and would raise the interesting question of whether or not we should put much stake into anti-substitution intuitions in simple sentences involving co-referential names in fictional stories.

One final worry deals one might have is that, though the experiments have shown a significant difference in intuitions regarding substitution in simple sentences when



participants are given the identity statement versus when they are not given the identity statement, this does not show that one theory is better than the other. I agree. The experiments do not definitively show that one theory is better than the others. In fact, I never claimed that the experiments do show this. I have only claimed that these experimental results give us reasons for doubting Saul's thesis, and thus we should consider other possibilities that set out to explain these anti-substitution intuitions. Furthermore, this worry is a general worry about the implications of experimental philosophy in general and thus cannot be addressed here. In order to argue for one view over another using the experimental results, one must provide reasons why the split in the results are the way they are. I have offered a few possible explanations, and leave it up to the reader to decide what theory best explains the experimental data.

## CHAPTER 7

### CONCLUSION

In this paper I have discussed the many proposed explanations of anti-substitution intuitions about co-referential names in simple sentences. Jennifer Saul claims that the views I discussed are inadequate to explain these anti-substitution intuitions because they all fall prey to two problems, the enlightenment problem and the aspect problem. I then discussed Saul's thesis that instead of looking at semantic and pragmatic views that set out to explain away anti-substitution intuitions, we should instead set out to explain why it is people have these anti-substitution intuitions in the first place. She puts forth a psychological view that refers to what she calls 'nodes' which are like mental files that are associated with names of individuals. Saul claims that when we come to learn that two names co-refer to an individual after previously thinking that those two names referred to two distinct individuals, we do not merge the two nodes we have of that individual, but instead we establish a link to the two nodes so that information can be shared between them. She claims that there are good reasons for one to neglect to merge mental files, and she thinks that this explains why people have anti-substitution intuitions about co-referential names in simple sentences. Furthermore, she believes that people have these anti-substitution intuitions even when they are explicitly led through the inference that the two names co-refer, that is, she believes that anti-substitution intuitions of this sort are stringent.

I then gave experimental data from experiments that I conducted to test whether or not it is in fact true that people have these intuitions in the first place, and if they do have these intuitions, to test whether or not they are as stringent as Saul thinks they are. I

argued that my data shows that these intuitions are not as stringent as Saul thinks they are, and that the data also shows that they may not be as prevalent in the first place. This is because the results of the first experiment were close to a 50-50 split, with about half of the participants agree with the sentence “Superman went into the phone booth at 11:15 AM on August 8<sup>th</sup>, 1991” after being given the sentence “Clark Kent went into the phone booth at 11:15 AM on August 8<sup>th</sup>, 1991” and about half of the participants disagree with the sentences. I then went through each theory that Saul argued against in her book *Simple Sentences, Substitution, and Intuitions* and discussed how these theories would explain the experimental data, concluding that only one of the views seemed able to do so, which was Alex Barber’s implicature theory. I then considered how Saul’s theory would explain the data, and concluded that there are three possibilities that might be able to explain the experimental data. The first possibility is that Saul’s view, and not Barber’s, best explains the data; the second possibility is that Barber’s view, and not Saul’s, best explains the data; and the third possibility is that Saul’s view is compatible with Barber’s view, and that this combined view best explains the experimental data.

In order to show that this is a viable option, I discussed possible ways for Barber’s view to avoid the enlightenment and aspect problems. I argued that Barber’s view can avoid these two problems, and thus the three options I put forth are all relevant possibilities. I ultimately leave it up to the reader to decide which view best explains anti-substitution intuitions about co-referential names in simple sentences. I think that this paper has shown that at least one of the views that Saul criticizes is a potential candidate for explaining these anti-substitution intuitions, and that this paper has put some pressure on Saul’s view.

I have considered the limits of the experiments that I conducted to test anti-substitution intuitions in simple sentences, acknowledging two main worries. The first is that by asking participants to assume that the Superman stories are true, I am in effect forcing them to put themselves into some sort of pretense that is unclear. In this case, it is possible that different participants may be imagining different scenarios, which may affect the way that they respond to the questions. The second worry is that participants might respond differently in answering questions about real-life cases involving substitution of co-referential names than they do in answering questions about fictitious scenarios. I have suggested that, to test these worries, someone should do additional experiments that involve real-life cases of individuals who have two (or more) co-referential names. These studies should be carefully created to ensure that the examples that are being used involve two different names that are associated with different characteristics of the individual, so that the cases more closely resemble the fictitious cases being discussed in the literature.

## REFERENCES

Barber, Alex. "A Pragmatic Treatment of Simple Sentences." *Analysis*, Vol. 60, No. 4 (Oct. 2000); 300-308. Web.

Moore, Joseph. "Saving Substitutivity in Simple Sentences." *Analysis*, Vol. 59, No. 2 (April 1999); 91-105. Web.

Saul, Jennifer. *Simple Sentences, Substitution, and Intuitions*. New York; Oxford University Press, 2007. Print.

APPENDIX A  
IRB STUDY PROPOSAL

#### Instructions and Notes:

- Depending on the nature of what you are doing, some sections may not be applicable to your research. If so, mark as “NA”.
- When you write a protocol, keep an electronic copy. You will need a copy if it is necessary to make changes.

#### 1 Protocol Title

Include the full protocol title: Superman/Clark Kent Subject Intuition Surveys #1-8

#### 2 Background and Objectives

Provide the scientific or scholarly background for, rationale for, and significance of the research based on the existing literature and how will it add to existing knowledge.

- Describe the purpose of the study.
- Describe any relevant preliminary data.

The purpose of this study will be to gauge the intuitions of non-philosophers of the truth values of sentences that have to do with identity and substitution. For example, participants will be asked to evaluate the truth value of sentences such as “Superman can jump more tall buildings than Clark Kent” and “Superman can jump more tall buildings than Superman.” The background of this project is the claim made by Philosopher Jennifer Saul that we have the intuition that sentences such as “Superman can jump more tall buildings than Clark Kent” are true, but sentences such as “Superman can jump more tall buildings than Superman” are always false. Saul also claims that not only do subjects have these intuitions initially, she claims that they also have these intuitions even when explicitly led through the identity sentence “Superman is Clark Kent”. A further purpose of this study will be to gauge whether or not the moral character associated with co-referential names will affect the way participants respond when evaluating these sorts of sentences. Preliminary data has shown that, contrary to Saul’s claims, though non-philosophers do have the intuition that sentences such as “Superman can leap more tall buildings than Clark Kent” are true when not explicitly led through the identity sentence “Superman is Clark Kent”, they do not have this intuition when they are explicitly led through the identity sentence. Preliminary data regarding the moral character associated with co-referential names has not yet been evaluated.

#### 3 Inclusion and Exclusion Criteria

Describe the criteria that define who will be included or excluded in your final study sample. If you are conducting data analysis only describe what is included in the dataset you propose to use.

Indicate specifically whether you will target or exclude each of the following special populations:

- Minors (individuals who are under the age of 18)
- Adults who are unable to consent

- Pregnant women
- Prisoners
- Native Americans
- Undocumented individuals

None of these populations will be targeted, though minors will be excluded.

#### 4 Number of Participant

Indicate the total number of participants to be recruited and enrolled: 2000

#### 5 Recruitment Methods

- Describe when, where, and how potential participants will be identified and recruited.
- Describe materials that will be used to recruit participants. (Attach copies of these documents with the application.)

All participants will be recruited through Amazon Mechanical Turk. They will be directed from Amazon Turk to the Survey Monkey survey via a link that will be posted on Amazon Turk.

#### 6 Procedures Involved

Describe all research procedures being performed and when they are performed. Describe procedures including:

- Surveys or questionnaires that will be administered. (Attach all surveys, interview questions, scripts, data collection forms, and instructions for participants.)
- What data will be collected including long-term follow-up?
- Lab procedure and tests and related instructions to participants
- The period of time for the collection of data.
- Describe the amount and timing of any compensation or credit to participants.
- If the research involves conducting data analysis only, describe the data that that will be analyzed.

All survey questions will be collected as data.

The collection of data will take place for one year (January 2014 – January 2015).

Participants will receive 20 cents for completing the survey, which should not take longer than 1 minute to complete.

All Surveys will include the following information and following questions:

Please answer the following questions and then turn the page. There are no right or wrong answers to these questions. Please pay attention only to your own survey, and refrain from looking at anyone else's survey. **IF YOU HAVE ALREADY COMPLETED A SURVEY FROM THIS REQUESTER, OR YOU HAVE COMPLETED A SURVEY**



WITH SIMILAR CONTENT, PLEASE DO NOT TAKE THIS SURVEY!!! Upon turning the page, PLEASE DO NOT RETURN TO THIS PAGE OR ANY OTHER PAGE DURING ANY POINT IN THE SURVEY.

2. What is your gender?

- Male
- Female

3. What is your age?

4. Which of the following best describes your education level?

- Some High School
- High School Graduate
- Some College (No Degree)
- Associates Degree
- Bachelors Degree
- Graduate Degree (Masters, Doctorate, etc.)

5. Please enter your MTurk ID here, then return and re-enter your MTurk ID on the Survey Link page.

Survey 1 will ask the following question:

1. Assume the Superman stories are true. Also assume that the following sentence is true:

A. Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8th, 1991.

Given that the Superman stories are true and that A. is true, to what extent do you agree with sentence B.:

B. Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8th, 1991.

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

Survey 2 will ask the following question:

1. Assume the Superman stories are true. Also assume that the following sentences are true:

A. Clark Kent went into the phone booth and Superman came out at 11:15 AM on August 8th, 1991.

B. Superman is Clark Kent.

Given that the Superman stories are true, that A is true, and that B. is true, to what extent do you agree with sentence C.:

C. Superman went into the phone booth and Clark Kent came out at 11:15 AM on August 8th, 1991.

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

Survey 3 will give the following information:

Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Instead of saving the boy, however, Superman watched the boy fall to his grizzly death, despite having the ability to save him.

Survey 3 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

Clark is morally blameworthy for letting the boy fall to his death.

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

Survey 4 will give the following information:

Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Instead of saving the boy, however, Superman watched the boy fall to his grizzly death, despite having the ability to save him.

Survey 4 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

Superman is morally blameworthy for letting the boy fall to his death.

- Strongly Disagree

Somewhat Disagree  
Neutral  
Somewhat Agree  
Strongly Agree

Survey 5 will give the following information:

Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Noticing that the little boy fell off, Superman swiftly jumps into action and flies to the boys rescue, saving the boy from certain death.

Survey 5 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

Clark is morally praiseworthy for saving the boy.

Strongly Disagree  
Somewhat Disagree  
Neutral  
Somewhat Agree  
Strongly Agree

Survey 6 will give the following information:

Suppose there is a man with extraordinary powers, call him Superman. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name Clark. One day Superman was watching the Empire State Building, when a little boy fell off. Noticing that the little boy fell off, Superman swiftly jumps into action and flies to the boys rescue, saving the boy from certain death.

Survey 6 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

Superman is morally praiseworthy for saving the boy.

Strongly Disagree  
Somewhat Disagree  
Neutral  
Somewhat Agree  
Strongly Agree

Survey 7 will give the following information:

Suppose there is a man with extraordinary powers, call him Robert Jones. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name William Smith. One day Robert Jones was watching the Empire State Building,

when a little boy fell off. Instead of saving the boy, however, William watched the boy fall to his grizzly death, despite having the ability to save him.

Survey 7 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

William Smith is morally blameworthy for letting the boy fall to his death.

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

Survey 8 will give the following information:

Suppose there is a man with extraordinary powers, call him Robert Jones. Further suppose that, in order to work his normal, everyday job at a newspaper, this man goes by the name William Smith. One day Robert Jones was watching the Empire State Building, when a little boy fell off. Noticing that the little boy fell off, Robert Jones swiftly jumps into action and flies to the boys rescue, saving the boy from certain death.

Survey 8 will ask the following question:

1. To what degree do you agree or disagree with the following sentence:

William Smith is morally praiseworthy for saving the boy.

- Strongly Disagree
- Somewhat Disagree
- Neutral
- Somewhat Agree
- Strongly Agree

## 7 Risks to Participants

List the reasonably foreseeable risks, discomforts, or inconveniences related to participation in the research. Consider physical, psychological, social, legal, and economic risks.

There are no reasonably foreseeable risks to participation in this research.

## 8 Potential Benefits to Participants

Realistically describe the potential benefits that individual participants may experience from taking part in the research. Indicate if there is no direct benefit. Do not include benefits to society or others.

The participants will receive twenty cents for participating.

#### 9 Prior Approvals

Describe any approvals – other than the IRB - that will be obtained prior to commencing the research. (e.g., school, external site, or funding agency approval.)

N/A

#### 10 Privacy and Confidentiality

Describe the steps that will be taken to protect subjects' privacy interests. "Privacy interest" refers to a person's desire to place limits on with whom they interact or to whom they provide personal information.

Describe the following measures to ensure the confidentiality of data:

- Where and how data will be stored?
- How long the data will be stored?
- Who will have access to the data?
- Describe the steps that will be taken to secure the data (e.g., training, authorization of access, password protection, encryption, physical controls, certificates of confidentiality, and separation of identifiers and data) during storage, use, and transmission.

Data will always be confidential, as we do not have any information that links participants to the survey.

#### 11 Consent Process

Indicate the process you will use to obtain consent. Include a description of:

- Where will the consent process take place
- How will consent be obtained

#### Non-English Speaking Participants

- Indicate what language(s) other than English are understood by prospective participants or representatives.
- If participants who do not speak English will be enrolled, describe the process to ensure that the oral and/or written information provided to those participants will be in that language. Indicate the language that will be used by those obtaining consent.

Waiver or Alteration of Consent Process (written consent will not be obtained, required information will not be disclosed, or the research involves deception)

- Review the “CHECKLIST: Waiver or Alteration of Consent Process (HRP-410)” to ensure you have provided sufficient information for the IRB to make these determinations.

Participants who are minors (individuals who are under 18)

- Describe the criteria that will be used to determine whether a prospective participant has not attained the legal age for consent to treatments or procedures involved in the research under the applicable law of the jurisdiction in which the research will be conducted.

By taking the survey through Amazon Turk and Survey Monkey, the participants will be consenting to taking the survey. Therefore, since there is no risk of harm to participants, we request a waiver of the requirement to obtain written documentation of consent.

## 12 Process to Document Consent in Writing

If your research presents no more than minimal risk of harm to participants and involves no procedures for which written documentation of consent is normally required outside of the research context, the IRB will consider a waiver of the requirement to obtain written documentation of consent.

(If you will document consent in writing, attach a consent document. If you will obtain consent, but not document consent in writing, attach the short form consent template or describe the procedure for obtaining and documenting consent orally.)

## 13 Training

Provide the date(s) the members of the research team have completed the CITI training for human participants. This training must be taken within the last 3 years. Additional information can be found at: <http://researchintegrity.asu.edu/training/humans>

Thomas Zimmerman – 1/29/2012