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auxiliary hypothesis, and figure out that what he meant to say was that Carnap was the greatest philosopher of the twentieth century.

## 5 Conclusion

There is no Holy Grail of Content, no proposition that both characterizes the cognitive content of each of the parties to an instance of communication, and is also what is believed by the speaker, understood by the hearer, and expressed by the utterance. In a successful act of communication, there will be a single proposition expressed by the utterance, and believed by both participants, the referential proposition. But it won't get at the cognitive content. The reflexive contents of the two beliefs and the utterance are more closely connected with cognitive content, but they are not the same and they are not what is said. In the case where the auxiliary semantic hypotheses of the speaker are correct, the referential content of the motivating belief and that of the utterance will be the same. In the case in which the auxiliary semantic hypotheses of the hearer are correct, the referential content of his understanding will be the same as that of the utterance. That is, in common sense language, the speaker said what he intended to say, and the hearer understood what was said.

## References

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motivates and utterance, which is intended to express the belief, I'll call the reflexive content of the belief the *doxastic* content of the utterance. There is a correspondence between notions in the belief and terms in the utterance. This means there are two routes to referential content from the utterance. We can load the reflexive content of the utterance with facts about what the terms of the utterance refer to. Or we can load the doxastic content of the utterance with fact about what the notions are *of*. If the speaker's auxiliary semantic hypotheses are true, the resulting referential contents will be the same. The same process is mirrored with the hearer. If the hearer's auxiliary semantic hypotheses are correct, the referential content understood will be the referetnial content of the utterance.

Let's look at how this process works with famous example borrowed from David Kaplan [Kaplan, 1989]. He points at a picture behind him, and says to his audience, "That man is the greatest philosopher of the twentieth century." Kaplan believes that the picture behind him is of Rudolf Carnap. So his plan is to refer to Rudolf Carnap by referring to the person pictured behind him, and to do that by pointing behind him and saying "That man". But the man pictured behind him is Spiro Agnew, the Carnap picture having been replaced by a prankster. So his auxiliary semantic hypotheses is incorrect. He believes that Carnap is the greatest philosopher of the twentieth century, and that belief motivates his utterance. But what he actually says is that Spiro Agnew is the greatest philosopher of the twentieth century.

What will Kaplan communicate to his audience? It depends. If his audience takes this to be a normal case of communication, they will reason that Kaplan said that Agnew was the greatest philosopher of the twentieth century, so he must believe it, so.... Well, who knows. Perhaps some will trust what they take to be Kaplan's judgement, others, refusing to believe that Agnew had such hidden talents, will think Kaplan has lost his mind. But those who remember the picture of Carnap and have a modicum of wit, will realize that Kaplan has been fooled. They will infer his mistaken

**Reflexive Content of B2:** That the city that the perception attached to  $n_{B2}$  is of, is beautiful.

**Reflexive Content of B3:** That the city that the notion attached to  $n_{B3}$  is of, is beautiful.

Note the  $n_{B2}$  and  $n_{B3}$  might be the same notion, or might not be. They will be the same if the speaker realizes that the city he is demonstrating is Sacramento, otherwise they won't be.

A reconstruction of the process that leads from belief to utterance needs to bring in *auxiliary semantic beliefs*. In the case of (U3), the speaker knows, in virtue of knowing English, that by saying "Sacramento" he will refer to the city standardly called Sacramento among the people he is talking to. He further believes that the city he will refer to with "Sacramento" is the one he "has in mind". When the auxiliary beliefs are wrong, the speaker does not say what he intended to. For example, the speaker of (U3) might have been thinking of Stockton, a city he has visited many times; he finds the way the canals and rivers of the Delta terminate around the downtown quite striking. But he has always had trouble keeping the names "Stockton" and "Sacramento" straight in his mind.

In the case of (U2), if the speaker is merely picking up the information that Sacramento is beautiful perceptually, and then passing it on demonstratively, it's hard to imagine him making this sort of mistake. But another scenario is that he believes Sacramento to be beautiful quite independently of his current perceptions, and in fact is in Chico, not Sacramento. He intends to say something about Sacramento, but refers demonstratively to Chico and so does not say what he intends.

The motivating belief and the motivated utterance will never have the same reflexive contents, as I have defined this term, for the reflexive content of the belief is about the belief itself, and the reflexive content of the utterance is about the utterance itself. However, in the case in which a belief

with the fact that Elwood referred to Sacramento with "Sacramento"

Is the reflexive content of an utterance then our Holy Grail, that which is common to the belief that motivates an utterance, the utterance itself, and the state of understanding it?

It is clearly not going to be the *referential* content of the belief. The belief that motivates (U2), for example, is a belief about Sacramento, the city the speaker is in. This belief is present in the speaker's mind before he makes the utterance, and would remain there even if he had decided not to say anything.

Is it then the reflexive content of the belief? It cannot be, for the belief is a belief, not an utterance. If a content is to be the reflexive content of the belief, it must be reflexive, that is, place a truth condition on the belief itself, not on an utterance, particularly one that might not exist yet. So we haven't found our Holy Grail.

## 4 Doxastic Content

We can make good sense of the idea of the reflexive content of a belief: the proposition that gets at the conditions truth puts on the belief itself, although to do so we need to have a model of what beliefs are like. I'll assume simple beliefs like those expressed by (U2) and (U3) consist of ideas being connected together in the mind. Ideas of properties and relations I'll just call ideas; ideas of individuals I'll call notions (See [Crimmins & Perry, 1989], [Perry, 2000]). I'll further assume that notions can be attached to perceptions or detached. The notion of Sacramento involved in the belief that led to (U2) was attached to the speaker's perception of Sacramento. If we imagine (U2) being uttered by someone far away from Sacramento, perhaps planning a trip, the notion would be detached.

Given this simple model, and letting  $n_{B2}$  be the notion involved in (B2) and similarly for  $n_{B3}$ , we can suggest these reflexive contents:

was not common knowledge between them that Sacramento was beautiful, or the driver had expressed some skepticism on the point earlier, the companion might wonder what motivated the sudden change of mind, and look at the speaker, see that he was looking out the window and appreciating the town they were in, and thereby learn that it is Sacramento.

Our use of content seems to focus on the referential truth conditions of utterances, rather than their reflexive truth conditions. This is natural, since we are usually aiming to transmit information that will be stored in some form that is not overly context sensitive. The speaker doesn't want the companion to *remember* that a particular utterance was made about a beautiful city, but that a particular city was beautiful. The belief about the utterance was a stepping stone to this belief, that can quickly be forgotten. Nevertheless, we clearly are adept at planning our utterances in ways that exploit their reflexive contents.

The reflexive contents of utterances and their referential contents both get at truth-conditions. The reflexive contents give us the truth-conditions given the meaning of the words, but not the reference of the names and indexicals. Think of this as what *else* has to be the case for the utterance to be true, given the facts about the meaning of the sentence used in the utterance. The referential level incorporates answers to some of the questions left open at the reflexive level. The referential contents is what *else* has to be the case for the utterance to be true given all that is given at the reflexive level and more, namely, who or what the terms refer to. I will say that the proposition

That Sacramento is beautiful

is the result of *loading* the proposition

That the city referred to by Elwood with "Sacramento" is beautiful

I will utter (2), producing a token — a disturbance of the air waves — that impinge on my companion's ears. He will perceive the disturbance as a token of an English sentence, the meaning of which he knows. At this point, he will think "The city the speaker of this token demonstrates is beautiful." It will be obvious to him that I am the speaker. He will look at me to see if I am demonstrating the city we are in, or perhaps pointing to one on the map, or perhaps to a billboard depicting a city, or whatever. Once he sees I am merely directing my eyes out the window of the car to the city we are in, he will realize, "If I look out the window, I'll see a beautiful city". And so, if he has any desire to see a beautiful city, he will take his eyes off the map for a second and look outside.

I have, of course, represented as a conscious plan that which would be quite under the level of consciousness in many cases. The premises reflect the steps that would be involved in the bit of know-how exhibited by speaker were made explicit. In fact, most adults are pretty good at producing utterances that fit plans suited to the context they are in. Those who are not skilled, or who don't bother to exercise their skill, can be irritating. Such people expect you to see where they are pointing when you can't see them (perhaps they are in the back seat of a car you are driving), to know who they are when they call on the phone, without telling you their name, to know which person has just popped into their mind, in the middle of a conversation about someone else, even though they refer to them with a "he" or "she", and so forth.

Uttering (3) would not have served Elwood's purpose in the situation we are imagining. The companion doesn't know that Sacramento is the town around them. He might just assent, saying, "Yes, I'm sure it is; I can't wait until we get there." On the other hand, the driver might use this utterance as a way of transmitting the information that they were in Sacramento. If it

beautiful, just by looking around him, even if he had no idea what city it was, or thought it was Stockton or Chico.

We can also imagine cases that go the other way around. Elwood might know that Sacramento beautiful, because he read this is an authoritative Travel Guide. And he might be in Sacramento. But he might not know that the city he was in was beautiful, for he might not have gotten to the parts of Sacramento that make it beautiful. Constructing a similar case about the weather is left as an exercise for the reader.

If we look back at (U2) and (U3), we see that their reflexive contents are quite different:

**Reflexive Content of (U2):** The city the speaker of (U2) demonstrates is beautiful.

**Reflexive Content of (U3):** The referent of the speaker's use of "Sacramento" in (U3) is beautiful.

These differences correspond to the differences we saw in the cognitive content of (U2) and (U3). The speaker of (U2) needs to be able to demonstrate the city of which he speaks, but does not need to know its name. The speaker of (U3) needs to know the name of the city he asserts to be beautiful, but does not need to be able to demonstrate it, or know that he is if he is.

The reflexive content is not *what the speaker said* in either case. The subject matter of the speaker's utterance was a city, Sacramento, not the utterance itself, in both cases. If we reconstruct the implicit plans the speaker might have, the role the reflexive content plays becomes clearer.

Suppose the speaker of (U2) merely wants his companion to look up from the map for a moment and notice the pretty city they have entered. He wants his companion to think something like, "if I look out the window, I'll see a beautiful city". He plans as follows:

on July 1, 2000. Call this utterance (4U). Taking "today" to be a term that refers to the day it is used, and taking into account when I used it, it seems I have expressed the singular proposition that **July 1, 2000** is cold. But suppose we don't take this into account—that we don't incorporate the facts about the referent? Then it seems like we can say the following:

(5) (4U) is true iff the day on which (4U) is uttered is cold.

This gives us as a truth-condition of (4U) a proposition about (4U) itself:

(6) That the day on which (4U) is uttered is cold

(6) is what I call the *reflexive content* of (4U). "Reflexive" means simply that the truth-conditions of (4U) are given in terms of conditions on (4U) *itself*.

The reflexive content corresponds to what someone understands who hears an utterance like (4U) without knowing what day it occurs on. Also, since we take "utterances" to be intentional acts of writing as well as speaking, we can think of someone who finds (4U) written in a diary, without any indication of when it was written. Such a person can be said to understand the utterance, in that they understand the language in which it was written, and know the conditions under which it would be true. But they don't really know what proposition was expressed.

Notice that someone who heard Elwood make this statement, but had no idea what day it was, could nevertheless verify whether it was true or not. We have ways of finding out if it is cold on a given day, namely, stepping outside and feeling, or by looking at a thermometer through the window. Similarly Elwood, the speaker, could determine that the statement he would make by uttering (4) would be true, without knowing what day it is, simply by stepping outside and looking at the thermometer.

This point about days and temperatures is similar to the one made above about cities and being beautiful. Elwood could tell that Sacramento was

### 3 Reflexive Content

The problem with referential contents is that it looks at what is required for an utterance to be true *given* the reference of its terms. Quite different things are required to be the reference of "this city" in (2U) and "Sacramento" in (3U). To be the reference of the first, a city must be the one Elwood is in and is demonstrating when he uses the words. To be the reference of the second, a city needs to be the reference of Elwood's use of "Sacramento". Elwood uses the term "Sacramento" to refer to the capital of California in a variety of situations; its reference does not depend on his being in or demonstrating Sacramento, even when he is in a position to do so.

The knowledge or beliefs that are required to use "this city" are then different than the ones required to use "Sacramento". As Elwood enters the city, he acquires a belief about a certain city that it is beautiful. The city he is acquiring the belief about is the one he is perceiving. All one needs to know, in order to refer to the city one is perceiving with the words "this city," is the rules for the use of demonstratives in English. Even though Elwood is lost, he can manage this. But to express the thought that the city you are perceiving is beautiful by saying "Sacramento is beautiful," one needs to know or at least believe that one is perceiving Sacramento; that is, that the city one is perceiving is the one that one calls "Sacramento" .

It seems then to get at the content of Elwood's beliefs, that he manages to convey in his utterances, we need a way of looking at content that does not incorporate the referent, but instead incorporates the conditions required to be the referent of the term used.

I provide such a level of content for utterances in my book *Reference and Reflexivity*[2001]. I call it reflexive content. The idea is very simple; one looks at the truth conditions of an utterance *without* fixing the referent. Suppose I say,

(4) Today is cold

same beliefs, and wouldn't lead to the same beliefs on the part of a credulous speaker. If Elwood had been in Sacramento and said,

(2) This city is beautiful

he would have expressed the proposition that Sacramento is a beautiful city — at least according to Kaplan's classic account of the content of statements using indexicals and demonstratives [Kaplan, 1989]. But notice that he might have said this before he realized that he was in Sacramento. Perhaps he is traveling up California's central valley and has gotten a bit confused. He thinks he is in Stockton, but he has already gone another sixty miles and arrived in Sacramento. There will be an important change in his belief states when he realizes he is in Sacramento. The later belief he can express by saying,

(3) Sacramento is a beautiful city

while the earlier belief he would express with (2).

Consider these pairs:

(2B) The belief Elwood acquires as he drives into Sacramento, not knowing where he is;

(2U) Elwood's utterance, "This city is beautiful".

(3B) The belief Elwood acquires when he realizes the city he driven into is Sacramento

(3U) Elwood's utterance, "Sacramento is beautiful".

The utterance (2U) is the natural expression of the belief (2B); the utterance (3U) is the expression of the belief (3B). But we cannot distinguish between the content of (2B) and (3B) on the basis of their standard semantics, for they are assigned the same singular proposition.

## 2 Referential Content and Cognitive Content

The natural place to begin our search is with a bit more explicit report of Elwood's utterance.

- (1) Elwood said that Sacramento is a beautiful city.

There is considerable if not universal agreement among philosophers of language that this report identifies the content of Elwood's utterance as a proposition about Sacramento. The proposition might be modelled as a set of possible worlds in all of which Sacramento was beautiful; it wouldn't be required that it be *called* "Sacramento" in all of the worlds, or be the capital of California, or be a town Elwood referred to. Nothing would be required of it except what ever is required to make it the very same city we in our world call "Sacramento, California". Another way of modelling it, which might bring up fewer metaphysical problems, is simply as a pair consisting of the city, Sacramento, and the property of being beautiful. In either case, we have what David Kaplan [1989] calls a singular proposition; that is, a proposition individuated by an individual and something asserted of it.

I call this the "referential content" of the statement, because it incorporates the object referred to. We can think of it as giving the truth-conditions of the utterance given the identity of the reference. *Given* that Elwood was referring to Sacramento, California with his use of the name "Sacramento", his utterance is true if *it* is a beautiful city.

Here is our first candidate for the Holy Grail of Content, then, the singular proposition that Sacramento is a beautiful city. So, this proposition would be the content of the state that motivated Elwood, the content of his remark, and what the listener understood.

The problem with this is that it seems that Elwood might have many different statements that expressed this singular proposition, but that are not "cognitively equivalent"; that is, they wouldn't be motivated by the

If desire D and beliefs B motivate action A, then A will promote the satisfaction of D if the beliefs B are true.

Suppose I plan to go to Sacramento for the weekend. I say that I enjoy visiting beautiful cities, and I believe Sacramento to be one. This explains my trip in that my action is one that will promote my desires if my belief is true.

In our little description above, Elwood's telling Henry that Sacramento was a beautiful city is explained by his believing it and wanting Henry to know it too.

We pass content along from one believer to another through the use of language. Our description above records such an event. It looks very simple. Elwood has a belief with the content that Sacramento is a beautiful city; this belief motivates an assertion with the very same content; Henry understands him, and ends up believing very proposition Elwood asserts, which motivated him to go for a visit.

It seems then there is a content that is the content of a belief (doxastic content), of the assertion motivated by a belief, and of the state of mind of a person who understands the assertion (content as understood). It seems that if we can identify this content, we will have taken a big step in understanding a key part of our ordinary concept of content. I call this proposition, the one that is the content of the assertion, the belief that motivates it, and the understanding of a person who hears it, the Holy Grail of Content. The discourse above makes it look like it should not be hard to find. It is whatever the three that-clauses in the description of the discourse all identify.

It turns out that things are more complicated than this. Our natural way of reporting content more or less ignores the contextual factors that fix the reference of indexicals and demonstratives, and the way beliefs about context and about connections between names, ideas and things are required to line up what one intends to say, what one says, and what one gets understood as saying. What we find is more like a tea service than a single Grail.

# The Search for the Holy Grail

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## 1 Introduction

Consider Henry's account of how he came to be in Sacramento:

Because Elwood knows I like to visit pretty places, and believes that Sacramento is a beautiful city, he told me that it was. Since I learned from Elwood that it was beautiful, I've looked for an opportunity to visit Sacramento.

I use "content" for entities of various sorts that we designate in clauses of sentences reporting assertions and other speech acts, beliefs, desires, goals and other mental states. These clauses identify what we say, what we believe, what we want, what we do, and so forth. The most familiar contents are propositions, which designated by that-clauses in sentences describing assertions and beliefs. Infinitives are often used to designate desires, goals and actions, as with "to visit Sacramento".

Such contents are, I think, best modelled as abstract objects that can naturally be assigned truth-conditions, performance conditions, compliance conditions, or some other kind of success conditions. Relations between these contents correspond in some more or less complex way to the concrete states and events that we describe with their help. For example, it seems that something like the following principle constrains the relations among causal roles and contents of mental states and actions: