

The Subject Matter Fallacy

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1 Introduction

The subject matter fallacy is the fallacy of supposing that *the* content of a statement or a belief consists in the conditions the truth of the statement or belief puts on its *subject matter*: the objects the statement or belief is about. Consider my belief that Hillary Clinton is a resident of New York. The subject matter of this belief are the things and conditions (properties, relations) it is about: Hillary Clinton, the state of New York, and the relation of being a resident of. For the belief to be true, these objects have to meet certain conditions; the first two must bear the third to one another; that is, Hillary Clinton must be a resident of New York. It is quite natural, then, to take the proposition that Hillary Clinton is a resident of New York to be to be *the* content of the belief. But in fact it is only *one* of a number of contents of the belief; it is the content *given* the facts about reference; it is what *else* the world has to be like, once we take those facts as fixed. We need to appreciate that these contents, the *subject matter* or *referential* contents, are only one of a range of contents that are systematically related: the contents of a statement or belief *given* various facts. Of particular importance in the case of recognition are what I call *reflexive* contents, in which not all of the facts about the subject matter of a statement or belief are given. I call these reflexive, because conditions are put on the statement or belief *itself*.

In this paper I argue that if we commit the subject matter fallacy, we cannot provide suitable contents for statement of identity and beliefs about

identity, including the very common sort of belief that one acquires when one recognizes another person, place or thing.

I provide a case of recognition for contemplation in §2, introduce reflexive contents in §3. In §4 and §5 I try to explain the importance of reflexive contents, and their relation with subject matter contents. I discuss what I call “the subject matter fallacy,” which misleads us in such cases, in §6.

2 A Case of Recognition

Suppose that I have never met Fred Dretske, but I know who he is. As a matter of fact, suppose that I know every fact there is to know about which books Dretske has authored. Call these the Dretske/book facts, or the dretskical facts, for short. He has written, so far, *Seeing and Knowing*, *Knowledge and the Flow of Information*, *Explaining Behavior*, and *Naturalizing the Mind*. So I know, in particular:

- (1) Dretske wrote *Knowledge and the Flow of Information*

I admire this book very much, and have long wanted to meet and shake hands with its author.

Then one day I am at a party and I am standing next to Dretske, and we chat for a while. He says some interesting things about knowledge and information, and so I begin explaining—not quite accurately, one might suppose—Dretske’s ideas on the subject, and recommend that my interlocutor go out and read *Knowledge and the Flow of Information*. “Well actually,” he says, “I wrote *Knowledge and the Flow of Information*”. At this point I learn something, something I could express with,

- (2) You wrote *Knowledge and the Flow of Information*

or, pointing to Dretske,

- (3) That man wrote *Knowledge and the Flow of Information*

How did the content of my beliefs change, when I acquired this knowledge?

In the beginning of the story, my beliefs about Dretske were *detached* from my current perception of him. After Dretske told me who he was, they came *attached*. Here is what I mean by this. At the beginning of the story, I had beliefs about Dretske. These beliefs involve what I call a *notion* of Dretkse, associated with various ideas I've got from reading things by him and about him. The notion is sort of like internal file folder, and the ideas like information that has been put in it. This inner file was set up when I first heard about and read articles by Dretske. This notion is not, at the beginning of the story, attached to any perception I am having. That is, I am not building up information based on any of the things I am seeing.

When a notion is attached to a perception, the information one picks up perceptually modifies the ideas associated with the notion. If things go right, of course, the perception will be of the person or thing the notion is of. But the relation of attachment is independent of the relation of co-reference. Things can go quite wrong. Suppose for example that I have a perception of David Israel attached to my notion of Paul Newman. This is what happens when I see Israel and mistakenly take him to be Newman. My perception and my notion do not co-refer, but they are attached — by mistake. As a result I may tell people later, “Paul Newman is in Palo Alto”.

At the beginning of the party, my mistake is the opposite of this one. My notion of Fred Dretske, the one I am drawing on to describe his views, and my perception of my interlocutor, do in fact co-refer, but they are not attached. I am perceiving a thin, average-sized man with an intense, slightly puzzled, slightly amused, slightly annoyed expression. I don't add these ideas to my Dretske notion. I don't have the belief that Dretske is puzzled, annoyed, amused, and talking to me.

Here is a picture of the way our beliefs are organized, that will help make this clear. Think of the architecture of our beliefs as a three story building. At the top level are detached files (ideas associated with notions),

such as my beliefs about Dretske. At the bottom level are perceptions and perceptual buffers. Buffers are new notions, associated with the perceptions, and used to temporarily store ideas we gain from the perceptions until we can identify the individual, or form a permanent detached notion for him, or forget about him.

The middle level is full of informational wiring. Sockets dangle down from above, and plugs stick up from below. The ideas in the first floor perceptual buffers, and in the third floor files, are constantly compared. When there is a high probability that they are of a single person or thing, recognition (or misrecognition) occurs. The plug from the buffer is plugged into the socket for the notion. Information then flows both ways.

The information flowing up from the perception adds new ideas to the file associated with the notion. So, in the Israel-Newman case, the idea of being in Palo Alto is added to my Newman file. The information flowing down to the bottom level enriches the perceptual buffer, and motivates me to act towards the objects I see and hear in ways that would make no sense given only the information picked up from perception. So perhaps I yell in the direction of David Israel, “Hey, Paul Newman! Love your movies! Love your spaghetti sauce! Love your popcorn!”.

To return to the Dretske case. What happens when Dretske says, “I wrote *Knowledge and the Flow of Information*”? First my perceptual buffer is enriched by the idea that this fellow, the one I am talking to, wrote the book (he doesn’t seem like the sort to fib about such a thing to a stranger at a party). I’m quite sure there were no co-authors on the book. Activity ensues on my mind’s second story: perceptual plug finds notional socket. Information flows in both directions. This information is integrated with other things I know, including the social rule that one doesn’t blabber on about a book to its author as if one knew all about it. I am embarrassed and turn red. I say something like, “Oh, I’m very pleased to meet you. I didn’t recognize you. As you can tell I admire your work. I’m somewhat

embarrassed”. I shake his hand.

Now these remarks of mine, and my embarrassment, and my endeavor to shake his hand, seem to be explained by a new belief, a new bit of knowledge. It is what I shall call *recognitional* knowledge, the sort of knowledge that occurs when one attaches percept and notion. But what exactly is known in these cases?

3 Reflexive Contents

Consider now three of my mental states before recognition. One is my belief that Fred Dretske wrote *Knowledge and the Flow of Information*. On my simple model, this consists of my concept (mental general term) of being the author of *Knowledge and the Flow of Information* being belief-associated with my Fred Dretske notion (mental name, more or less). The second is my desire to shake Fred Dretske’s hand. This consists of the concept of my shaking hands with a person being desire-associated with my Dretske notion. The third is my perception that the man in front of me is friendly and outgoing. This consists of my perception of Fred Dretske, attached to a perceptual buffer, which is associated with the concepts of being friendly and outgoing (a mental statement).

If we look at the way we use the concept “what is believed” or “what a person believes”, we would find some good evidence for a referentialist treatment of beliefs about individuals, just as has been found in the case of statements about individuals using names, indexicals and demonstratives ([Barwise & Perry, 1983/99]: Chapter 10). A referentialist semantics takes the content of a representation to be a “singular proposition,” that is, a proposition about an individual, as opposed to being about some identifying condition that the individual satisfies. In this case, the referential semantics gives the result that I want to shake Fred Dretske’s hand, and believe that Fred Dretske is standing in front of me, friendly and outgoing. Given this

description of my mind, it is hard to understand why I don't reach out and grab his hand and give it a good shake: I want to shake x 's hand; I believe x is standing in front of me; I believe x is friendly and outgoing.

The reason, in terms of our simple model, is that to activate that bodily movement that is a way of shaking hands I need to desire to shake the hand of the person in front of me. I would form that desire, as a way of fulfilling my long standing desire to shake Dretske's hand, if all my beliefs about Dretske were in the same file. But they are not. There are two notions involved, my long-standing Dretske notion and my perceptual buffer. So I don't move.

Once I recognize Dretske, I do move my arm towards him, smile, and say, "I'd like to shake your hand" — a well-known procedure for shaking the hand of the person in front of one. And this action is rationally motivated by my new beliefs, in a way that it wouldn't have been by my old. That is, given the content of my beliefs, if my beliefs are true, this action is a way of satisfying my desire. We need a richer concept of content to understand what is going on.

Consider two beliefs, which I'll call b_1 and b_3 . b_1 is the belief that I had before the party, and would have expressed with (1). b_3 is the belief I acquired when Dretske said, "I wrote *Knowledge and the Flow of Information*." (I won't discuss the beliefs associated with (2), so the reader needn't worry about b_2 .) As above, I'll assume that a belief about an individual involves a notion of the individual and ideas of the relevant properties and conditions.

The first belief, b_1 , is not connected to my perception of Dretske. This sort of belief is (in more or less normal cases) about the *origin* of the notion — whoever or whatever it was that was referred to in the information that established it. If things go right, the origin will also be the *source* of a vast majority of ideas associated with the notion.¹ In this case, the name "Fred

¹See [Evans, 1973] for the concept of source and dominant source.

Dretske” on the cover of *Seeing and Knowing*, the first book I read of his, referred to Dretske, and led to my forming my notion. So it is a notion of him. The belief b_1 is true if that person wrote *Knowledge and the Flow of Information*.

The second belief, b_3 , also involves a number of ideas associated in a file. But this file is connected to a perception. Information gleaned from the perception is put directly into the file. Information in the file is used to deal with the object being perceived. This sort of belief is about the individual who is perceived.

As I said, our ordinary concept of “what is believed”, assigns contents in a way analogous to those the standard semantics assigns to the statements (1) and (3). This referential semantics for beliefs will say that what is believed is a proposition about the individual the notion or buffer is of. My old notion, involved in belief b_1 , is *of* Dretske, and so what is believed is that Dretske wrote *Knowledge and the Flow of Information*. My new perception is also *of* Dretske, and so what I believe after the recognition occurs is just what I believed before, that Dretske wrote *Knowledge and the Flow of Information*. This level of content doesn’t give us what we need, to understand what changed.

4 Incremental Content

There are many other levels available. Our ordinary concept of content has had its critics, but I am enthusiast. It is a key element of folk psychology, probably humankind’s greatest intellectual accomplishment. We need not to jettison content, but to discover more of it, which I propose to do with a formula I call the “Content Analyzer”:

CA: *Given such and such, ϕ is true iff so and so.*

Here ϕ is any truth-evaluable representation, *such and such* are facts about the representation, and *so and so* is the content assigned to ϕ given those

facts. *So and so* is what *else* has to be the case for ϕ to be true, *in addition* to the such and such that is given. It is the additional or *incremental* content of ϕ , *given* such and such. If we vary what is given, we vary the content assigned. These will not be different theories about *the* content of ϕ . They will be ways of getting at different systematically related contents of ϕ .

Consider Donnellan's famous example, "Smith's murder is insane." Given that the statement is in English, the facts about its syntax and the meanings of its words, what *else* has to be the case for it to be true? There must be a unique individual that murdered Smith, and that individual must be insane. This is the "attributive content". Now suppose we add to what is given the fact that Jones murdered Smith. Then what *else* must be the case for the statement to be true? Jones must be insane. This is the "referential content" in Donnellan's terminology. I shall say that the facts about the designation of "Smith's murderer" were *loaded* in the latter case, and *unloaded* in the former.²

What is not loaded, remains relevant. Think of propositions as sets of worlds. In the worlds that are members of the attributive content, various people will murder Smith, and each of them will be insane in that world. The issue of murdering Smith remains connected to the issue of being insane. On the other hand, *What is loaded, ceases to be relevant.* If we take it as given that Jones murdered Smith, we have the referential content. Given that Jones murdered Smith, what else has to be true for Smith's murderer to be insane? Jones has to be insane. In each world in the referential content Jones is insane, but he need not murder Smith in all of them, and in fact nobody has to murder Smith, Smith does not even need to exist. The facts about Smith and his murderer are used to get us to Jones, and then in effect thrown away. They are no more relevant to the truth of the referential *proposition* than that the utterance was in English, or that it occurred at

²Here I am employing Wettstein's [Wettstein, 1981] interpretation of Donnellan's distinction, and ignoring Donnellan's treatment of "near-miss" cases, an important aspect of his original discussion.

all.

In other words,

Only a small part of the truth conditions of an utterance are usually incorporated into what we think of as its content. The other parts are taken as given, and exploited to get us to the subject matter we are interested in.

Now consider my statement (3). On the standard semantics for indexicals and demonstratives, I would be taken to express the singular proposition that Fred Dretske is the author of *Knowledge and the Flow of Information*. This means we load the fact about who I am demonstrating into what is given. As our content assigner puts it:

Given that (3) is in English, etc., and given that the speaker is attending to and drawing attention to Fred Dretske, (3) is true iff Fred Dretske is the author of Knowledge and the Flow of Information.

The fact that we take this content to be “what is said,” however, does not mean that other, less loaded, contents are not available. If we do not load the facts about reference, we get:

Given that (3) is in English, etc., (3) is true iff the person the speaker of (3) is attending to and drawing attention to is the author of Knowledge and the Flow of Information.

The unloaded contents of (2) and (1) are quite different from that of (3):³

Given that (2) is in English, etc., (2) is true iff the person the speaker is addressing with (2) is the author of Knowledge and the Flow of Information.

³I do not claim that the analyses of demonstratives and names incorporated into these examples are particularly sophisticated, only that they are plausible enough to make the point.

Given that (1) is in English, etc., (1) is true iff the person the speaker of (1) is using "Dretske" to refer to is the author of Knowledge and the Flow of Information.

These differences are useful in understanding the different motivations one would have for uttering (1), (2) or (3), and the different information one might pick up from hearing them. These differences disappear at the level of referential content, which is typically not very useful for explaining the cognitive significance of statements.⁴

In the case of (1), (2) and (3), our unloaded contents were *reflexive*, in the sense that the contents had the utterance themselves as constituents.

Now let's return to b_1 and b_3 . If we do not take the reference as given, we can "retreat" to reflexive truth conditions. The belief b_1 involves a notion that is, in fact, of Dretske. When we set that fact aside, its truth condition is simply that whoever that notion is of, wrote *Knowledge and the Flow of Information*. Belief b_3 involves a perceptual buffer, that in fact is of Dretske. If we set that fact aside, the truth condition is that whoever that perceptual buffer is of, wrote *Knowledge and the Flow of Information*. Dretske is not a constituent of either of these propositions. The one has a detached notion as a constituent, the other a perceptual buffer. The ordinary referents of a statement are *not* constituents of its reflexive content, but rather the words that refer to them; the objects a belief is about are not constituents of its reflexive content, but rather the notions and buffers involved in it.

Just as the reflexive contents of our statements made clear how two statements with the same referential content can have quite different cognitive significance, the reflexive contents of our beliefs make clear how they can have different causal roles, each appropriate to its own reflexive content.

Reflexive content is the level of content at which the belief's capacity, or lack of capacity, for motivating action is relevant. It is the level at which knowing-that meets knowing-how. I know how to shake the hand of someone

⁴See [Perry, 2000], passim.

in front of me that I am perceiving. I stick out my hand towards the person, while smiling, and perhaps saying, “I’d like to shake your hand,” the fine movements being guided by the perceptions of my hand, the person, and their relationship. What ultimately drives the operation is a desire that will be satisfied only if I shake the hand of the person who my present perception is of. That is, the ultimately motivating desire is attached to a perception of the person. This desire will typically be a subsidiary desire, formed in virtue of a belief that has as its reflexive content, that the attached perception is of someone concerning whom I have a higher level desire.

In the Dretske case, once recognition takes place, I form such a desire. When recognition takes place, my perceptual buffer and my notion share ideas. This includes not only belief-associated ideas, but desire-associated idea. So the desire to shake a person’s hand becomes associated with my perceptual buffer of Dretske. The referential content of this new desire is simply to shake hands with Dretske, the same as the referential content of the desire I had had for years. There is no change in referential content to explain why I suddenly, after all of these years, stick out my hand. This is explained by the change in reflexive content, however.

5 The Search for Recognitional Knowledge

Have we then found what we are looking for, the bit of knowledge that I gained, when I identified Fred Dretske? Does this recognition amount to my believing something like the following?

- (4) The author of *Knowledge and the Flow of Information* is the person whom the perception attached to b_3 is of.

That is not the right way to look at it. One can see this in a couple of ways. In the first place, it would be a very odd belief for me to have. Well, this isn’t quite right. After all we are dealing here with a philosopher talking to a famous epistemologist. I might very well be thinking about my beliefs and

perceptions. I might be obsessing over them. Who knows what philosophers might be thinking about at parties. But at least it would be a very odd belief for most people to have.

Secondly, notice that believing the proposition in question, would not guarantee that I am in the mental state we are after. Suspend your belief that I am making up a story about not recognizing Dretske. Assume I am telling you the literal truth. In that case I have told you about a belief I once had, b_3 . You know quite a bit about it. And in particular you know (4), that the person that the perception attached to it is of, is the author of *Knowledge and the Flow of Information*. You'd perhaps use the past tense to express it, and say "the perception that was attached to it was of". If we worked hard, however, we could construct an example in which you knew this at the same time I had the belief, and if we worked even harder we could construct an example in which I believed (4), but this clearly was not part of my recognition of Dretske. This last sort of example would no doubt involve mirrors.

But we shouldn't need to go to all that work to see the point, which is that there is a difference between:

- believing a proposition P
- having a belief a reflexive content of which is P

In general, the propositions we believe, the ones referred to by the phrase "what he believes", are not ones about our own perceptions and ideas, but ones about their *subject matter*: the things, people, places and events that our perceptions and ideas are *of*. That is, when we describe our beliefs and perceptions we standardly do so in terms of their loaded contents. We do not say that I believe, of my Dretske notion, that is of someone who wrote a certain book, but that I believe that Dretske wrote the book. But those very same beliefs have *other* contents, that our Content Analyzer can get at by taking less as given. These are not alternative things the agent believes,

they are less loaded contents of his belief.

When we ascribe a belief to a person about a certain individual, and involving a certain property or relation, we suppose that the agent has a notion of that individual, and an idea of that property or relation. The agent keeps track of what is going on in the world in terms of those notions and ideas. But typically the agent will not have notions and ideas of all of the objects, properties and relations involved in the reflexive contents. A person could have a belief with (4) as its reflexive content, who had never heard of perceptions, and had no idea that he had any. But then we might ask, what relevance can this content have to understanding our beliefs?

6 Information Games

Although the non-philosopher of the last paragraph may not know about perceptions, he will know the difference between things he has perceptions of, and things he does not. Moreover, he will be able to adjust his action to the nature of his perceptions; he will be attuned to the difference between having a perception of a man two feet away, and one of a man three feet away, for example. In general, you do not need the concepts to be attuned to factors in a situation, that the theorist needs to discuss those factors. Attunement and belief are different faculties; different species of doxastic attitudes towards situations.

It may be helpful here to introduce the concept of an “information game” [Perry, 1997]. An information game involves two events, the pick up of information about something in the external world, and the use of that information to guide behavior towards that thing pursuit of goals. I see a tennis ball coming towards me, and I adjust my arm and wrist so that my racket hits it. This is an example, more or less, of a “straightthrough” information game; I use the information I am picking up perceptually to guide simultaneous action. My action needs to be attuned to the nature of

my perceptions. Beliefs don't have much to do with it.

Much of our lives is spent playing species of a quite different information game, however, which I call "detach and recognize". We pick up information about something in the external world at one time, by having perceptions of it. We store that information away for later use. At some later time we recognize the object, and use the information gotten previously to guide our behavior towards it. This approach doesn't work very well for playing tennis. But it works well with relatively stable properties of people, things and places that we encounter over and over in our lives.

I think the natural home for our concept of belief is to describe the information and misinformation we store in this detached way.

Suppose for example at the same party where I make a fool of myself with Fred Dretske, I also meet Krista Lawlor. Krista Lawlor is a young philosopher I had not previously heard of. When I meet her, a notion is assigned to store information about her. At first this notion is a perceptual buffer. I associate with it ideas of her interests, her name, her appearance and so forth. But then the party ends. She goes one way, I go another. My notion is detached. We can suppose that the perceptual buffer is promoted to the third-floor, or we can suppose that it sends all of its information up to a third floor notion and then expires. At any rate, I go home with a detached notion of Lawlor

If the file associated with this detached notion has enough relevant information in it, the next time I see Lawlor it will be helpful in two ways, in recognizing her, and in acting appropriately. First, my memory of her appearance will help me to recognize her. My memory of her name will enable me to greet her in an appropriate way, by saying "Hi Krista" instead of "Hey you" or "mumble-mumble". And my memory of her interests will enable me to engage in a mutually interesting philosophical conversation about, say, how we know when we have beliefs about the same thing, rather than merely saying "Nice weather" or "Read any good books, lately?"

When we play the detach and recognize information game, the person who picks up the information, and the person who applies it, need not be the same, for the information may have been communicated from one to the other. This information can be tremendously useful. I am heading to Bonn, Germany. I have never been there. I buy a map, and a guidebook. They each provide, in different forms, information that I can attach to *my* perceptions of Bonn when I get there, and then use to find the Opera House, or the University, or Beethoven's birthplace.

7 The Subject Matter Fallacy

Now I want to suggest that when we think of *knowledge*, it is these detached representations we think of — the representation that are capable of being passed from individual to individual, stored in libraries, perhaps for centuries, and then, at least in many cases, reattached to new perceptions of the relevant objects. And this leads to a central fallacy of philosophy, the fallacy of trying to explain, in detached representations the content that explains all of our knowledge.

It simply cannot be done. Useful knowledge, knowledge that guides our actions in pursuit of our goals, is attached. Detached knowledge is incomplete. The world of detached knowledge is the world of knowledge-completers. The view from nowhere is not a view at all. It is a mass of detached information, of no use until it is attached.

In the detach and recognize language game, attachments are used and then thrown away. I remember what Lawlor looked like, but I don't remember the perception I had. My cognitive structure is set up to keep track of facts about people, places and things, not perceptions. They come, they do their job, they leave.

And thus, when we characterize a person's belief and knowledge, we are typically after the detached knowledge. We ignore the shape of the

connection between notion and thing. Just as our mind is set up to glean and retain facts about people, places and things, our language for describing the mind focusses on the retained facts and not the means by which they were picked up, or will be used. This is the reason that referential content, the conditions that the truth of the belief places on the subject matter, given the way the mind is connected to it, has such a robust life in folk psychology, as *what is said* and *what is believed*.

But referential content is not the only content recognized in the practices of folk psychology. The folk who use folk psychology are perfectly able to understand why I don't shake hands with Dretske until I recognize who he is, until I realize that he is Dretske. The semantics of terms such as "recognize" and "realize" is not referential.

Our purpose here is not to do the semantics of recognitional terms, but to make the point that to understand the phenomenon of recognition one needs an enriched concept of belief content. One should think of a belief as having a hierarchy of contents, as more and more is taken as *given*, and detached from the truth conditions, culminating in the referential content. The other contents, the attributive and reflexive contents, are not different beliefs, but different aspects of the same belief, aspects that are necessary to understand the differences between beliefs with the same referential content.

I use the term "fallacy" because I think the mistake of thinking that the subject matter contents of a belief are its only contents has been used in a suppressed premise of important arguments, which I will call "indexical gap arguments." I have chiefly in mind the knowledge argument [Jackson, 1986], various arguments about time that go back to McTaggart's distinction between the A-series and B-series [McTaggart, 1921-27], and an argument by Tom Nagel in his article "The Objective Self." [Nagel, 1983]. I will illustrate the way the fallacy can work, however, with a less mysterious case, and leave the application to these more profound arguments and issues to other occasions.

Consider Gary. He is in a windowless hut across from Little America, just off Interstate 80 in western Wyoming (Little America is a gas station with a restaurant and souvenir shop. It has more gas pumps than anyplace in the world.) He has memorized an Interstate Road Map. Larry knows all the facts about the locations of things along Interstate 80—the order of states, cities, towns and villages as one progresses east to west or west to east along Interstate 80, from Berkeley through Reno, Salt Lake City, Little America, Cheyenne, Lincoln, and so on. But he isn't allowed to look out of his hut so he doesn't know where he is. Eventually he escapes. He sees all the gas pumps, realizes he is in Little America, and immediately knows a number of facts that seem to be facts about where things are along Interstate 80, but which he didn't know before. He already knew:

(5) Salt Lake City is southwest of Little America.

Now he learns,

(6) This place is Little America,

and infers

(7) Salt Lake city is southwest of this place.

And so on for many other things. What is the difference between (5) and (7)? Was something left out of Gary's Interstate Road Map? It seems that Gary knew all of the facts provided by the map, but there is something he didn't know, the fact that he learned and reported with (7). So there are geographical facts that cannot be captured by complexes of symbols on maps.

We might try to resolve this dilemma by adding Gary's hut (or even Gary himself) to the map. But this wouldn't solve the problem, for there is a difference between the fact we would add to the map, and that which Gary learns when he realizes where he is; that is there is a gap between, say,

Salt Lake City is southwest of the place occupied by hut *h*

or,

Salt Lake City is southwest of the place occupied by person *G*,

and

Salt Lake City is southwest of the place occupied by *this* hut

or,

Salt Lake City is southwest of the place occupied by *me*.

And the gap would remain even if the map found a place for Gary's notions and ideas and beliefs and perceptions, as the reader can verify by following the above pattern.

The item that is left out is expressed with an indexical, and the indexical seems essential to *expressing* the change in belief (which is *not* to say that it is essential to *having* the belief.). The kind of argument I have in mind takes off from this new item of knowledge, and gap between it and the original knowledge, so I call argument of this kind, "indexical gap arguments." At the heart of these arguments will be, perhaps quite implicit, some variation on this basic pattern:

- Episodes of knowledge are individuated by the fact known.
- Recognition involves a new episode of knowledge.
- So, recognition involves knowledge of a new fact.
- The inventory of facts available to the knower at the beginning of the episode does not include the fact known at the end of the episode. (Nothing the map offers Gary tells him that Salt Lake City is southwest of *this place*.)
- Therefore the inventory of facts was incomplete.

On my analysis, Gary's situation is as follows. The subject matter content of his map-based beliefs, even before recognition occurred and he learned where he was, required that the place across the hiway from him (which was, in fact, Little America) be northeast of Salt Lake City. He had two different notions, one map-based, one a buffer for a current perception, of the same place, Little America. Given these connections between his two notions and the same place, Little America, for his beliefs to be true Little America has to have all of the properties associated with either. The link that allows information to flow between the two, that motivates Gary's hike across the street and his inference that Salt Lake City is to the west, seems to have no effect whatsoever on this content.

To see its effect, we need to abstract from one or more of the connections. To see the effect of the link, let's shift to a case where the link is a mistake and leads from true beliefs to false ones. Consider the example above, where I thought I was seeing Paul Newman, although in fact I was seeing David Israel. Before I made the mistake, the link between my perceptual buffer and my Paul Newman notion, I had some true beliefs: Paul Newman is named Paul Newman; he makes good movies, and good Popcorn, etc. The man I am looking at is across the street; he can hear what I say if I shout at him, etc. When I make the link I acquire, for the first time, the false belief that Paul Newman is across the street. The key belief, that leads to this inference, is the one I would express with "That man is Paul Newman". This belief has the necessarily false referential content that David Israel is Paul Newman. This content isn't helpful in explaining anything. But the reflexive contents of this belief, which we get by abstracting from one or the other connections, relates the new belief to both the perceptions that gave rise to it and the somewhat surprising (to Israel) to actions to which it led.

In Gary's case, the referential content of his recognitional insight, "that place is Little America", is simply the necessary truth the Little America is Little America. The reflexive contents of this belief, however, relate the new

belief to the perceptions that gave rise to it and the actions that flow from it. Gary comes to have a belief that is only true if his present perception is of Little America, and this leads to actions that are reasonable if Little America lies in front of him.

In the indexical gap arguments, the subject matter fallacy occurs in the first step. One cannot classify beliefs simply by “facts known”. The fact known is basically (the exact details depending on one’s theory of facts and propositions) the subject matter content of the true belief in question. But episodes of knowledge that agree on the fact known, may differ in their reflexive contents. In Gary’s case, the second belief has the reflexive content that Salt Lake City is southwest of the hut he is then perceiving. The original belief did not have this reflexive content. The change in reflexive contents explains the changes that come with the new belief. Gary knows how to get to a place that he sees in front of him (walk), and so he learns how to get to Little America.

The original map no doubt did not contain the facts that are involved in the reflexive content of Gary’s new knowledge. But the iterations of the argument for the map’s essential incompleteness fail. Once we have added the hut, Gary, and his perceptions to the map, we have represented all the facts corresponding to all of the relevant contents of both his original and his new belief. Only if we try to make the facts we add to the map the *subject matter* contents of his new belief, rather than the *reflexive contents* of it, will we feel there are facts involved in his knowledge that the map’s inventory of facts is essentially incomplete.

8 Final Dretske Thoughts

I will end by returning to the Dretske case. When I identified or recognized Dretske. I did acquire a new belief. This was a belief that involved my perceptual buffer coming to be associated with the idea of writing *Knowl-*

edge and the Flow of Information. This new belief did not bring any new referential content with it, for its referential content was the same as my original belief, viz., that Dretske wrote *Knowledge and the Flow of Information.* But its total truth conditions are different than the belief I had before. It has different reflexive content. It is true only if the person my current perception is of, wrote *Knowledge and the Flow of Information.* It is the reflexive content of this belief that closes the gap between my desires and my action of extending my hand to Dretske. If my present perception is of the author of *Knowledge and the Flow of Information,* then the hand-shaking directed by my present perception will be a way of shaking hands with the author of *Knowledge and the Flow of Information.*

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