

Transmission of Knowledge and Information

～A Correspondence～

Masaharu Mizumoto & Fred Dretske

以下は F. Dretske と水本との2006年5月から9月までの電子メールによる通信をまとめたものである。水本がまず、情報と知識の伝達に関する代替的な理論を提案し、そこから様々なトピックへと議論は発展していく。

まず、水本による情報伝達的能力により知識の分析を与える提案に対し、ドレッキの以前の論文、「認知的袋小路」(1982)の議論が主題となっていく。そこでドレッキは、ある人AがPを知っており、「P」と他者Bに伝え、Bがその結果Pであると信じているにもかかわらず、BはPであると知っていない、とされる状況を提示している。水本はそれに対しドレッキの理論は知識が幸運な無知に依存する、という状況を認めることになる、と批判する。その後議論は *relevance* 概念の客観性（これは近年流行の文脈主義と真っ向から対立する）やドレッキの有名な *Closure Principle* にも及ぶことになるが、重要なのは、我々の対立は、知識の理論や証言 (*testimony*) の理論における食い違いというよりは、それらの理論の根底にある情報概念における食い違いから生じている、ということである。そしてこのことは、異なる情報概念が異なる認識論の体系を帰結する、ということの好例となっている。

しかしこうした興味以外にも、純粋にドレッキ哲学に関心を持つ者にとって、本稿で示されたドレッキの見解は十分興味深いものであろう。たとえばドレッキは、今日ずっと自分の妻を見ていなければ彼女が今生きているかどうか知らない、と言う（7月10日）が、これは驚くべき懐疑的な見方であり、このような見解が彼の理論の帰結であるということは、ほとんど知られていないように思われる。（なお二人の通信はその後も続いており、現在はおもに知識の不可謬性と帰納的知識が論じられているが、そこでドレッキは、(ポパーのような) 帰納的知識一般に対する懐疑を表明している。）

最後にこうした通信に発表の場を与えてくださった北海道哲学会『哲学年報』編集部に感謝したい。

The following is a correspondence between F. Dretske and M. Mizumoto from May 2006 to September of that year, concerning transmission of knowledge and information. Mizumoto later added footnotes with permission of Dretske, who also checked the content. That, however, does not guarantee that Dretske agrees to the view expressed in the footnotes. (Mizumoto)

On May 7, 2006, at 10 : 51 AM, mizumoto masaharu wrote :

Dear Fred,

This is Masaharu Mizumoto from Japan.

I recently read your paper on the defense of closure principle¹ in *Contemporary Debates in Epistemology*.² Quite apart from the issue of [epistemic] closure, in reading its note 4 I wondered if you have considered the following definition of knowledge.

A knows that p iff

- (1) A's belief p is caused by the information p, and
- (2) A is a source (or channel) of [the] information that p.^{3,4}

I have long felt that your response to the fake-barn case,⁵ based on the information theoretic analysis of knowledge (in your 1981), was incomplete.⁶ The belief of the subject A in the fake-barn situation is caused by real barn, and there is nothing wrong with the causal process, as long as we admit the possibility of perceptual knowledge in the ordinary situation.

So my proposal is to admit that A's belief is indeed caused by the information that there is a barn before A. The reason why A does not know it is that,

¹ The so-called (epistemic) closure principle is the thesis that knowledge is closed under known entailment : Roughly, if one knows that p and that p entails q, then he also knows that q. Famously, Dretske denies this principle.

² Dretske (2005).

in such a situation, he cannot convey [the] information to another person B (in a remote place) that there is a barn before A, even if he sincerely reports to B that there is a barn before him. There A cannot be a source, or an information channel, of that information for B, even if he [A] possesses the information in question.⁷

³ Basically Dretske's theory of knowledge in his (1981) requires only (1), and not (2) (cf. *ibid.* p.86). In his more recent words, "knowledge is *information-caused belief*" (Dretske 2005, p.25). The notion of information is defined by conditional probability, such that a signal *r* carries the information that *P* if and only if the probability of *P*, given *r* (and the subject's background knowledge *k*), is 1 (but given *k* alone, less than 1) (*ibid.* p.65). In this context recently Jäger (2004) questions the compatibility of this conception of information and Dretske's denial of the epistemic closure principle. In showing that this theory of information entails the closure principle, Jäger assumes that if *p* entails *q*, then when the conditional probability of *p*, given some signal *r* (and *k*), is 1, the conditional probability of *q*, given *r* (and *k*), must also be 1 (p.192). This is however exactly what Dretske would deny when he claims that we do *not* know that we are not brains in a vat even though we *know* we have hands. Objecting to such a theory of information is one of my motivations for the present proposal.

⁴ The condition (2) can also be put as, "A can transmit the information *p* to others". The relationship between the notion of "informability" here and that of ordinary assertibility is a subtle one. If we assume, as many philosophers do, that one may properly assert that *p* if and only if one knows that *p*, then of course informability and assertibility should coincide. But what is in question here is whether one's sincere statement "*p*" can really convey the information that *p* (whether or not the receiver can properly receive it). There are of course many *other* ways to communicate information, but they are not relevant in this context.

⁵ Fake-barn case is originally due to Carl Ginet, and first appeared in Goldman (1976), pp.772–3. It can be illustrated as follows: I am driving through a countryside, where a lot of elaborate fake barns are built. They look exactly like real barns, and I cannot distinguish them from where I am, but I don't know anything about the existence of such fakes in this region. Now I look at one building that looks like a barn and believe "That's a barn." In fact, it happened to be a real barn, while most of nearby buildings are fake. In this situation, my belief "That's a barn" is true and justified, but we cannot say I *know* it, since the truth of the belief looks too accidental.

I do know that on p.90 of your (1981), you explicitly claim that knowing that p does not imply being able to convey the information p .⁸ But if that is correct, can one transmit knowledge to other people without thereby transmitting information? Or do you mean that the subject who knows that the animal (a dachshund) is a dog can never transmit the knowledge to other people when he cannot distinguish dogs from wolves?

I think the above definition suits better with our intuition of the transmissibility of information and knowledge.⁹ (I'm sorry if you have heard the similar idea many times before, or you have already discussed this option somewhere. In that case, please tell me so.)

Best regards,
Masa

⁶ See chapter 5, especially pp.129–134, of Dretske (1981). Apparently, if the fake-barn case is not an instance of knowledge, the condition (1) above is insufficient. Dretske's supposed reply is that in such cases the subject's belief was *not* caused by the relevant information. But if one's belief P is formed through the perception of the fact P , then it is most natural to expect that that belief was caused by the information P , at least on the realistic conception of information, in which information is *out there*. Such a robust conception of information can be found in J. J. Gibson's work (e.g., 1966, 1979), and Dretske himself seems to endorse that kind of conception of information in his (1981) (see for example, p.145, pp.255–6). Denying that such a perceptual belief P is caused by the information that P , on the other hand, seems to force one to either hold somewhat queer theory of (transmission of) information, or abandon the major virtue of Gibsonian approach, namely *direct realism*, stipulating intermediaries between the world and us.

⁷ Later (in 2008) I found that exactly the same idea was proposed and considered in Graham (2000), pp.139–40. However, Graham basically presupposes Dretskean conception of information there, while the real disagreement between us here is about the notion of information. See below.

⁸ "Not everyone who knows that s is F is someone from whom one can learn that s is F ." (Dretske 1981, p.90)

date : Sun, 7 May 2006 16 : 17 : 59—0400

Dear Masa,

Thank you for your very interesting message.

You are right that I think one can know that P and not be able to transmit this knowledge to others (one's assurances that P do not carry the information that P) if one's belief that P, despite being caused by the information that P, would have been caused by a variety of other things even when P was false. So (to use Al Goldman's example¹⁰) one can know that an animal is a dog (one sees it up close and dachshunds have a distinctive look), but if one also mistakenly thinks wolves are dogs, one's statements to others that the animal was a dog do not carry this information. One would have believed (and said) it even if it weren't a dog (let's suppose its being a wolf is a relevant alternative). Given the false belief about wolves, one's belief (and utterances) do not increase the probability of its being a dog enough to let others know.

I once wrote an article ("A Cognitive Cul-de-Sac," *Mind*, 91, 361 (January 1982), pp.109–111) in which I argued precisely this point using a wine example (a person thought Chianti was a region in Bordeaux, France and, as a result, though chianti was a bordeaux wine).¹¹

Anyway, I won't bore you with the details of my example (I also used it to argue against closure) except to say that you are entirely right about which way I go on this. I wouldn't therefore, want to agree with your re-

⁹ The principle that one can acquire knowledge by simply accepting the other's words, is often presupposed in epistemology without argument. As a recent example, see what J. MacFarlane calls *Transmission Principle* :

If *B* knows that *p*, then if *B* asserts that *p* and *A* accepts *B*'s testimony without doxastic irresponsibility, *A* also comes to know that *p*. (MacFarlane 2005, p.133.)

MacFarlane presents this principle "as a widely held view about testimony" (*ibid.*), and refers to McDowell, Evans, Burge, Williamson, etc., though it is not clear whether he himself endorses this principle in the end.

¹⁰ See Goldman (1976) p.779.

quirement on knowledge that one has to be a “source” of information in order to know.

Best,

Fred

On May 12, 2006, at 10 : 43 AM, mizumoto masaharu wrote :

Dear Fred,

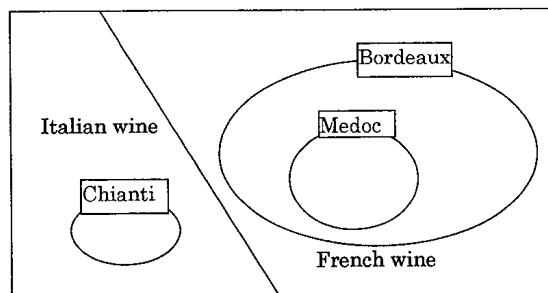
Thank you for your answer and the information.

I checked your paper and found it very interesting.

I agree that, in the example you describe, the person who knows that p can fail to transmit the information p to another person. But that is not because

¹¹ Dretske (1982). There he presents two examples. In the first case at a dinner party the host served a Medoc to guests. Next day George, one of the guests, says to Michael that they served a Bordeaux. But George mistakenly believes that Chianti is a Bordeaux. Still, George *knows* that they served a Bordeaux since he can distinguish a Chianti from a Medoc. There according to Dretske George cannot convey the information that they served a Bordeaux to Michael, even though George knows it. In the second case, several weeks later George forgets that they served a Medoc, but still believes and knows that they served a Bordeaux. However, according to Dretske, here George does not know that they served a French wine, since it could have been a Chianti. Moreover, Gorge here cannot convey to another person, Susan, the information that he had a Bordeaux there.

This piece of knowledge is incommunicable, and thus the situation is called a *cognitive cul-de-sac*. To be clear about the example and the discussion that follows, the following abstract diagram might help understand the actual geographical relationship.



the person cannot convey the information p , but simply because the transmission of information depends also on the epistemic state of the person who receives it.

Suppose that Susan knows that the person who invited George to the dinner party does not like Chianti, and therefore would never serve it. She may even know that George (mistakenly) believes that Chianti is a Bordeaux wine.

The relevant alternative is eliminated by Susan, and it seems that there is nothing to prevent Susan from knowing that they served a Bordeaux. But according to your theory, even in that case Susan cannot know it, since George's answer does not carry that information in the first place.

As naturalists we want to say that information was there even if no one could detect it. The transmission of information must therefore be easy, especially if information channels, TV sets, the internet, or whatever, in general carry information without "knowing" the content.

Yours,
Masa

date : Sat, 13 May 2006 12 : 00 : 37 - 0400

Dear Masa,

No, I think George's answer (to Susan) does carry the information that they served a Bordeaux. I have relativized information (in KFI¹²) to what the receiver already knows, and if Susan already knows the host would never serve a Chianti, then George's statement carries (to Susan) the information that it was a Bordeaux.

¹² Abbreviation of the title of Dretske (1981), *Knowledge and the Flow of Information*.

If the listener did not know this about the host, then George's statement that he served a Bordeaux would carry only the information that it was a bordeaux or a chianti. In KFI I used an example (from bridge) to illustrate : holding three aces in my own hand, my partner's bid of 5 clubs over my 4 NT (Blackwood convention), the conventional meaning of which is 0 or 4 aces, carries the information to me, but not to the opponents, that he has 0 aces.

But you probably don't like this way of handling information.

Fred

On May 19, 2006, at 10 : 34 AM, mizumoto masaharu wrote :
Dear Fred,

I'm sorry that I misunderstood your theory then.
But I found a possible difficulty in your answer.

Before asking a question about it, however, could you correct my misunderstanding (if there is any) in the following difficulty I found in your 1982 paper?

There in the first example,
George knows that they served a Medoc.
George knows that they served a Bordeaux.

In the second example (several weeks later),
George has forgotten that they served a Medoc.
George knows that they served a Bordeaux.
George does not know that they served a French wine.¹³

But didn't George know that they served a French wine in the first example?

If so, according to the principles (C) and (D) you present there,¹⁴ since George has not forgotten that they served a French wine he remembers it, and therefore he still knows that they served a French wine.

So if the principles (C) and (D) save his knowledge of a Bordeaux, they also save his knowledge of a French wine.

So it seems that you should admit either that George does not know that they served a Bordeaux in the second example, or that the second example does not constitute a counterexample to the closure principle.

Masa

date : Mon, 22 May 2006 10 : 40 : 48 - 0400

Dear Masa,

You are right. Principles (C) and (D) show that he knows it was a French wine as well as knowing it was a Bordeaux. I became convinced of this later in discussions with a colleague at Wisconsin (Palle Yourgrau) . This led us to write an article together called "Lost Knowledge" (Journal of Philosophy

¹³ This is because, according to Dretske, Gorge's memory can "tell" him only that it was a Bordeaux, and therefore for him it could have been a Chianti. Since being a Bordeaux entails being a French wine and Gorge knows it, we have here an explicit instance of failure of the closure principle, if Dretske is right.

¹⁴ These principles are expressed in Dretske (1982) as follows (p.111);

(C) If S knew that P, and has not forgotten that P, then he remembers that P.

(D) If S remembers that P, then S knows that P.

Though Dretske later denies (C) (or defends it by introducing extremely queer senses of "forget" and "remember" .See below), (D) can also be doubted : One may remember that P but cannot recall it, and now believe that not-P. Whether there is such a counterexample depends, of course, on the sense of "remember" here. But note that, even if we stipulate that *one remembers that P iff he can recall it*, this "can" can be ambiguous, allowing several different interpretations. See for more on this point, my (2008).

1983)¹⁵ in which we argued that (C) is, in effect, false.¹⁶ There are two ways of “losing knowledge” --by forgetting in the usual way (no longer believing) and by losing your justification for what you continue to believe. So George no longer remembers that it was a Bordeaux even though he knew it was a Bordeaux when he drank it and he has believed throughout this period that it was a Bordeaux.¹⁷ When he forget it was a Medoc, he lost the crucial piece of information that supported his “memory” that it was a Bordeaux.

So you are right: this example is NOT an effective counterexample to closure. But I still think it is an effective counterexample to the transmissibility of knowledge.¹⁸

¹⁵ Dretske and Yourgrau (1983).

¹⁶ In the paper, however, Dretske and Yourgrau do not deny (D). But why don't they deny (D), instead of (C)? In fact, it is much easier to deny (D) rather than (C), if they have come to think that Gorge does not know that he had a Bordeaux. As a result of holding to (C), they are forced to accept a bizarre sense of the terms “forget” and “remember” (as discussed in the next footnote). Yourgrau aside, Dretske sticks to the principle (D) presumably because his informational theory of knowledge (according to which knowledge is information-caused belief) only specifies the condition of knowledge *acquisition*, and not that of knowledge *preservation*. However, his another theory of knowledge, or relevant alternatives theory, does *not* entail this kind of thesis. So this constitutes a possible discrepancy between his two theories of knowledge. Thus my present proposal (at the beginning of this correspondence) would better suit the relevant alternatives theory than Dretske's own, though not quite the same or equivalent.

¹⁷ As Dretske and Yourgrau themselves seem to admit, this is a strange use of the terms “remember” and “forget”. For example, according to this use of the term, a person can be said to have forgotten someone's birthday even if he correctly believes that today is her birthday and sends flowers and a card to her! (p.362) This sounds bizarre. They distinguish forgetting by losing the relevant belief from forgetting by loss of the appropriate epistemic relation for the continued belief (*ibid.*). It is this latter sense of “forgetting” that is so odd.

¹⁸ Note that only the first example counts as a counterexample to the transmissibility of knowledge, since (according to their conception of knowledge and memory) in the second example Gorge does *not* know that they served a Bordeaux any more.

Fred

On Jun 1, 2006, at 5 : 16 PM, mizumoto masaharu wrote :

Dear Fred,

I am glad to hear that my reading was not mistaken, but I am again sorry for my ignorance of your later paper.

Now let me ask you a question about the situation I presented before, where the following two facts hold.

Fact 1 : The host would never serve Chianti.

Fact 2 : George believes that Chianti is a Bordeaux wine.

We agreed that, where

P : They served a Bordeaux,

George's answer to Susan that P, carries the information that P, in the following case.

Case 1

Susan knows both fact 1 and 2.

My question is, whether in the following cases the same is true.

Case 2

Both fact 1 and fact 2 hold, but Susan knows [and believes] neither of them.

Case 3

Only fact 2 holds, but Susan knows, from an independent source,

that the host did not serve a Chianti, or any Italian [without knowing (believing) fact 2].

It seems to me that in both case 2 and 3, George's answer to Susan that P conveys the information P. In case 3, whether Susan knows [fact 2]¹⁹ or not, for her the relevant possibility is eliminated just as in case 1. But if so, in case 2 too, the relevant alternative seems to be eliminated objectively by the situation.²⁰ However, according to my understanding, you would not say that in case 2 George's answer carried the information P, since otherwise Susan would KNOW that P. Or would you?²¹

Masa

date : Fri, 2 Jun 2006 11 : 48 : 10 - 0400

Masa,

You present me with a nice set of cases. I'm a little suspicious of [Fact

¹⁹ Originally I wrote here "fact 1", but from the context it is clear that it must have been fact 2.

²⁰ To be precise, I should have said (as I say below) here that the alternative is made irrelevant by the objective situation. It is the *person* who *eliminates* relevant alternatives. But note that, I do *not* assume that Susan thereby *knows* that P. What is assured here is that the information P is properly transmitted to Susan, though Susan has not eliminated relevant objectives *for her*. (Note that what alternative is relevant is relative to the subject's epistemic state, just as information is essentially so relativized, according to Dretske.)

²¹ My purpose of bringing up these cases is to illustrate the situation where Dretske can admit that one receives the information P and believes it but does not know that P. Thus my position here is that in all these cases George's utterance "P" does convey the information P (whether he remembers he had a Medoc or not), and Susan receives it, but only in case 1 and 3, but *not* in case 2, Susan knows that P.

1]²² (how reliable, for instance, is the host's commitment to never serving Chianti?), but if we take this (as you obviously intended it) as the kind of regularity that will support counterfactuals, then I would agree with you : George's answer to Susan carries the information that P. Whether or not she knows Fact 1, she can learn (come to know) that they drank a Bordeaux from George's statement that they had a Bordeaux. In the circumstances (no Chianti served), George's statement makes the probability = 1 of its being a Bordeaux.

Of course, if Susan knows Fact 2 and not Fact 1, she might not trust George. His statement will (or might) not cause her to believe they had a Bordeaux since she will wonder whether it might not have been a Chianti. But she is getting the information whether she knows it or not.

Fred

On Jun 8, 2006, at 10 : 29 AM, mizumoto masaharu wrote :

Dear Fred,

Thanks for your answer. I actually want to agree with you.

That is, in case 2, Susan indeed seems to KNOW that P (they served a Bordeaux). But should we really say so?

As you admit, Susan would not believe P anymore once she learned Fact 2 (that George believes Chianti is a Bordeaux). So her belief P is just contingent on her lucky ignorance.

Isn't it the Gettier situation?²³ Shouldn't we say that Susan does not know,

²² Originally Dretske writes here "Fact 2", but again, it is clear from the context that he means Fact 1. My earlier mistake must be responsible for this error.

²³ By "Gettier situation" I mean situations where one's belief in question is true and justified yet not knowledge, because the belief is true only accidentally. For Gettier's original paper, see Gettier (1963).

just as Jill in the political assassination case,²⁴ where her true belief that the political leader has been assassinated is also due to her accidental ignorance about the deceptive announcement that the assassination failed?

Masa

date : Thu, 8 Jun 2006 14 : 53 : 36 - 0400

Masa,

I don't think we should deny Susan knowledge here. I have always had the same intuitions about the assassination example. I can't rob you of knowledge that P by telling you (falsely) that I have tricked you about P just because you might (having no evidence that I'm now lying) believe me and stop thinking you know that P. You are ignorant of whether I actually tricked you (about P) or whether I'm now trying to trick you by telling you I tricked you about P. As long as original conditions (leading you to believe that P) were normal, I think you continue to know that P as long as you continue to believe it on the same grounds. The only way we can rob someone of knowledge is by getting them to abandon the belief.

But I admit people have different opinions about these cases.
That makes it tough to formulate general conditions for knowledge.

Fred

On Jun 18, 2006, at 1 : 14 PM, mizumoto masaharu wrote :

Dear Fred,

I admit that Harman's depiction of the political assassination case was not

²⁴ See Harman (1973) pp.143-4.

really convincing. He merely made it LOOK rational for Jill to abandon her belief (that the political reader was assassinated) if she watched the deceptive news, by saying “everyone else in the country watched the announcement and believed it.”²⁵ But of course whether she would abandon the belief or not depends on her epistemic state. If she is in an evidential state such that she would not abandon her original belief even if she heard the news, then we may conclude that Jill actually KNOWS the fact.²⁶ And I believe you agree to this. (Don’t you?)

However, although you say, “The only way we can rob someone of knowledge is by getting them to abandon the belief,” I wonder why it is necessary that the subject ACTUALLY abandon the belief in order for her to cease to know. For example, you know that there is a barn before you. Then God suddenly creates many fake-barns around there, thereby you cease to know while you continue to believe it “on the same grounds”. Admittedly, this example is so artificial. But analogous (more natural) cases seem easy to think up.

In any case, in the case I presented, when Susan formed the belief that they served a Bordeaux, George already and still believes that Chianti is a Bordeaux. So in this respect the situation is nothing different from the standard fake-barn case. In the latter case, the subject would abandon or at least suspend the belief that there was a barn in front of him, once he learned that there were a lot of indistinguishable fake-barns around there. In the former case, Susan would abandon the belief in question once she learned that George believed Chianti was a Bordeaux, as you admit.

Masa

²⁵ To be precise, “everyone else has heard about the televised announcement. They may also have seen the story in the paper and, perhaps, do not know what to believe” (*ibid.* p.144)

²⁶ See for more about such a theory of knowledge, chapter 1 and 2 of my (*manuscript*).

date : Sun, 2 Jul 2006 13 : 55 : 40 - 0400

Dear Masa,

Your second paragraph [above] is an interesting case (God creating fake barns and, thus, robbing you of knowledge). I guess it depends on what he is “taking” from you. Not the original knowledge (the knowledge you had before he created the fakes) since this is still intact as far as I can see. What he is supposed to take away from you is the knowledge that the (real) barns you now see are (real) barns.²⁷ But you never had that knowledge. Or, if you did, I don’t see why it isn’t still knowledge. You knew it and you haven’t forgotten it. So you still know it. Or am I missing something here?

Fred

On Jul 8, 2006, at 12 : 39 PM, mizumoto masaharu wrote :

Dear Fred,

To clarify my point, let P be “That is a barn”. Before God creates fake barns, say at time t1, you know that P. After God created them, say at t2, you still know that P-at-t1 (since you still remember it), but at that time you cannot say you know P, or P-at-t2, any more, even if there is still the same real barn before you.

On the other hand, your view allows that, of two people who are

1. in the same (present) external environment,
2. in the same (present) belief state (or even physically identical),
3. with the same mental (including PERCEPTUAL) history,

²⁷ I am not quite sure of the difference between this proposition and the original one in question.

only one knows but the other doesn't know some fact, solely due to the difference of the EXTERNAL history [the history of external environment] .If this is what you maintain, then it seems no less extraordinary view than the standard externalist view like mine, though I am not challenging you [r] view here.

Masa

date : Sat, 8 Jul 2006 16 : 46 : 28 - 0400

Masa,

I think the case is too underdescribed for me to be very sure what to say about it. You say that "you still know that P-at-t1 (since you remember it)". If this means you still know that that (what you are looking at) was a barn at t1, then I don't see why you don't still know it is a barn since God creating fake barns doesn't turn real barns into non-barns (and you are still looking at what you knew at t1 was a barn). But if this means that you still know (at t2) that you knew that what you were looking at (at t1)--but are no longer looking at at t2--was a barn, then why don't you still know (at t2) that what you were looking at (at t1) was a barn. You just (because God has created so many fake barns) wouldn't be able to pick it out as a real barn again if you looked around.

I'm not trying to be obtuse about this. I just don't know what it means (I actually think it is ambiguous) to say that at t2 you still know that P at t1.

Fred

On Jul 10, 2006, at 10 : 14 AM, mizumoto masaharu wrote :

Dear Fred,

Sorry for the ambiguity. Your first interpretation was what I meant. So let

me try again in a slightly different manner.

At t_1 , I know that there is a barn before me. But at t_2 , I don't know that there is a barn before me any more. However, even at t_2 , I still know that there WAS (at t_1) a barn before me.

Admittedly, this may be somewhat counterintuitive, if the barn before me is still real. But that is what the externalist of knowledge must accept, and seems to me not so radically different from the following case ;

I am talking with a man, who I know is a father of a son.
Unfortunately, unbeknownst to us, while talking, his son,
living in a remote place, dies in an accident, say at t . Then

Before t , I know he has a son.

But after t , I don't know he has a son any more.

However, even after t , I still know he HAD (before t) a son.

I hope this parallelism alleviates the counterintuitive impression.

But then do you admit my description of your view? If so, do you find it less counterintuitive than the present one?

Masa

date : Mon, 10 Jul 2006 16 : 18 : 03 - 0400

Masa,

I'm afraid we don't agree on our judgments about cases. I don't, for instance, think you know the man's son (living in a remote place) is still alive. The fact that he died in an accident without any change in your evidential condition shows that you didn't have the information that he was (still) alive. It is for that reason that I don't think I know my wife is still alive when I

haven't seen her all day. It is completely reasonable, of course, to believe she is still alive, but I don't think I know she hasn't been in an auto accident, etc. If someone called me up and said my wife had been killed in an auto accident, I would not react by saying they must be lying (since I know she is still alive).

Maybe I'm being too skeptical here.

And now I've forgot what our disagreement is about.

Fred

Dear Fred,

I'm sorry for going off the track, but I mentioned the point because I thought that one can cease to know without any internal change was obvious for almost everyone, and therefore your reply was totally unexpected for me. But now I understood your view, or the degree of your commitment to it, and I am not going to challenge that view (though it seems to me that you are too friendly to skeptics²⁸).

So let me go back to our original case (I hope you still remember).

The case we have been discussing was not like the political assassination case, but just like the standard fake-barn case, in the sense that when Susan formed the belief that they served a Bordeaux, George already and still believes that Chianti is a Bordeaux. So this time let me put the point in the

²⁸ This is because, this Dretske's view amounts to saying that knowledge P requires that P would never cease to be the case without being noticed, which is too stringent as a condition of knowledge. For example, suppose it's raining at t1 and it will stop raining later at t2. Then no one can know that it is raining at t1 *unless* he will notice, at t2, the rain stopped.

following way.

Fact 1 : The host would never serve Chianti.

Fact 2 : George believes that Chianti is a Bordeaux wine.

Given Fact 2, for Susan the possibility that the host served an Italian wine is REAL, and that is why she would abandon or suspend the belief that they served a Bordeaux, once she learned Fact 2. Whether or not some possibility is relevant for Susan is an objective matter, in this case determined by Fact 2, WHETHER OR NOT Susan knows it. This alternative is something to be eliminated by knowing Fact 1, but clearly Susan has not eliminated it since she does not know Fact 1.

So Susan has not eliminated a relevant alternative, does she? (For you reference, you said, in this case Susan knows that the host served a Bordeaux, since here George's utterance carries the relevant information.)

date : Sat, 15 Jul 2006 11 : 59 : 10 -0400

Masa,

Thanks for bringing me back up to speed on our discussion. I have some problem with the way you are describing the case. I'll tell you what my problem is and we'll see if that is the issue that separates us.

You say

- > Fact 1 : The host would never serve Chianti.
- > Fact 2 : George believes that Chianti is a Bordeaux wine.
- >
- > Given Fact 2, for Susan the possibility that the host served
- > an Italian wine is REAL, and that is why she would abandon or
- > suspend the belief that they served a Bordeaux, once she
- > learned Fact 2.

I agree with this so far. Susan (being a reasonable person) would suspend

her belief that they served a Bordeaux if she learned Fact 2. But given Fact 1, Chianti is not, in fact, a relevant possibility. So Susan might cease to know a Bordeaux was served because she ceases to believe it, but NOT because she doesn't get this information. She ceases to know it because the information she receives (that the host served a Bordeaux) is no longer causing the appropriate belief (that he served a Bordeaux).

- > Whether or not some possibility is relevant for Susan
- > is an objective matter, in this case determined by Fact 2,
- > WHETHER OR NOT Susan knows it.

I disagree here. Whether or not some possibility is relevant is not determined by Fact 2. It is determined by Fact 1. Susan learning Fact 2 (without learning Fact 1) makes her think, mistakenly, that Chianti is a relevant possibility (given her evidence), but Fact 1 (which she doesn't know) shows that this is wrong. It is NOT a relevant possibility. It might, as you say, be relevant TO HER, but this simply means that she (mistakenly) takes it to be relevant. It does not show that it IS relevant.²⁹ So she mistakenly thinks the verbal communication ("they served a Bordeaux") does not carry the information that they served a Bordeaux. She is wrong about this.

Her ignorance of Fact 1 prevents her from knowing something she would otherwise know.

- > This alternative is something to be
- > eliminated by knowing Fact 1, but clearly Susan has not eliminated it
- > since she does not know Fact 1.
- > So Susan has not eliminated a relevant alternative, does she?

²⁹ But note that, (1) whether some possibility is relevant or not is indeed relative to the subject's epistemic state, and (2) Fact 2 is not any imaginary hypothesis but an actual fact, being objectively there. In this respect the situation is utterly different from the cases like the brain-in-a-vat hypothesis and Cartesian Demon case Dretske presents below, which lack any objective evidence.

> (For you reference, you said, in this case Susan knows that
> the host served a Bordeaux, since here George's utterance
> carries the relevant information.)

Yes, I would still say that if Susan, ignorant of Fact 2, takes the verbal communication ("they served a Bordeaux") as carrying the information that they served a Bordeaux (which, in virtue of Fact 1, it does), then (if this causes her to believe they served a Bordeaux) she knows they did.

Think about an analogous case. Suppose some skeptic thinks that a deceptive Cartesian Demon is a relevant possibility. But (I would say) thinking an alternative relevant doesn't make it relevant. If there is no such demon, then this is not a relevant possibility even if the skeptic thinks it is. So if the skeptic is prevented from believing (say) that he has two hands by the perceptual information he receives (thinking, perhaps, that she should suspend judgment about matters he doesn't have information about), he will not know he has two hands. OK. But if this perceptual information still causes him to believe he has two hands, then he knows he has two hands whether or not he knows (or thinks) that he knows this.

Fred

date : Fri, 28 Jul 2006 15 : 18 : 43 - 0400

[what follows is Dretske's reply to my message which is included below]

Hmm! We do seem to be having trouble agreeing.

I put my questions (and disagreements) below :

On Jul 27, 2006, at 12 : 19 PM, mizumoto masaharu wrote :

> Dear Fred,

>

> I found three problems in your account of the case. Let me call them
> A, B, and C, respectively. (Please forgive me for a long message.)

>

> Problem A :

> I agree with you in that relevance is an objective matter. As you say,
> merely thinking an alternative relevant doesn't make it relevant.

> Let me put it as follows.

>

> Even if some possibility is subjectively relevant, surrounding facts
> (one's environment) can render it objectively irrelevant.³⁰

>

> By the way, this is why I think we KNOW that we are NOT brains in
> vats.

> Any apparent reason to think that I might be a brain in a vat is
> objectively irrelevant, by virtue of the surrounding facts (even if
> I mistakenly take it seriously), just as the reason to think that
> the host didn't actually serve a Bordeaux, namely, George believes
> that

> Chianti is a Bordeaux, was made irrelevant by the surrounding facts
> (in that case, the fact that the host would never serve a Chianti).

> This by itself is not a problem, but seems a problem for you, since
> it would undermine the reason for rejecting the closure principle.

I think the possibility of being a brain in a vat is NOT a relevant possibility when considering such (ordinary) things as whether we know we have two hands, whether we are sitting or standing, etc. But when we wonder whether we know that we are not a brain in a vat, THEN it becomes a rele-

³⁰ Again although I agree with Dretske on this point and believe with Dretske that Susan receives the relevant information, I do *not* assume here that Susan thereby knows that P.

vant possibility. Why? Because it is the ONLY alternative (and thus a relevant alternative) to the fact (that we are not a brain in a vat) that we are saying we know. What is and is not a relevant alternative is relative to what one is claiming to know. That (I think) is why closure fails.

> Problem B :

- > The point of your account was that in your original case (Case 1),³¹
- > where Fact 1 does not hold, Gorge's utterance "P" does not convey
- > the information P, whereas in my example (Case 2), where Fact 1
- > does hold,
- > George's utterance does convey the information P, which is why in
- > Case 2,
- > but not in Case 1, Susan knows that P.³²
- > But of course BOTH Fact 1 and Fact 2 (the fact about Gorge's
- > mistaken belief) are relevant for Susan's knowledge. Indeed, it is
- > because of Fact 2 that Fact 1 is relevant here. Fact 1 is relevant
- > in so far as knowing of it is just another way to eliminate the
- > Chianti-possibility (and there should be also other ways to
- > eliminate it).

I admit that Fact 1 is relevant (in case 2) because it affects what information is conveyed by George's utterance (that he had a Bordeaux). As long as Fact 1 holds, George's utterance (that he had a Bordeaux) carries the information that he had a Bordeaux. When Fact 1 doesn't hold (case 1) his utterance does not carry the information that he had a Bordeaux. So I don't think that (as you say) Fact 1 is relevant BECAUSE Fact 2 holds. Fact 1 is relevant all by

³¹ "Case 1" here refers to the second example in Dretske (1982) (where George has forgotten that he had a Medoc), and should be distinguished from the case with the same name I mentioned earlier. I am sorry for the possible confusion.

³² This is a careless mistake. As I have been assuming, I am *not* committed to the view that in Case 2 Susan knows that P. What I *am* committed to is only that there George's utterance carries the information P. On the latter point Dretske and I agree.

itself.³³

> Thus consider the following case (as Case 3)³⁴ ; After the party,
 > by the time George tells Susan that they served a Bordeaux, the host
 > changed their mind, perhaps by finally realizing that Chianti is a
 > good
 > wine, so that Fact 1 does not hold any more. But then according to
 > your
 > conception of information George's utterance "P" does not convey
 > the information P since the situation is the same as that of Case 1.³⁵

I don't agree. At the time George drank the wine, it could NOT have been a Chianti. The fact that it could have been a Chianti if he drank it 1 hour later (after the host changed his mind) is irrelevant. So what George says in case 3 (that he had a Bordeaux) carries the information that it was a Bordeaux. Why? Because it couldn't (given the time he tasted it) have been a Chianti (the only non-Bordeaux wine he would have confused with a Bordeaux).

³³ I am not sure about this reasoning. Suppose Fact 2 does not hold and George thereby has no mistaken belief about Chianti. Then *whether or not* Fact 1 holds, George's utterance does carry the relevant information to Susan, which means that Fact 1 is irrelevant in this respect.

³⁴ The point of bringing up this case may not be very clear. My intention was to argue that, according to Dretske's theory (1) in Case 3 George's utterance does not convey the information P, and therefore Susan does not know that P, but (2) the epistemic situation of Susan in Case 2 and 3 should not be different (on which Dretske agrees below), and therefore (3) Susan does not know that P in Case 2 either. In response, Dretske denies (1) (and therefore (3)), but there is a reason to think that Dretske should accept (1), as we shall see below.

³⁵ In particular, I had in mind here the first example of Dretske (1982) where George has not forgotten that he had a Medoc. But without Fact 1 George's utterance does not convey the information whether or not George has forgotten he had a Medoc. So whether it is meant to be the first example or the second does not make difference here.

> Susan therefore cannot know that P solely on the basis of George's
> utterance.

So I guess I disagree here too. Susan can know it (if George's utterance causes her to believe it).

> However, why does such a subsequent event makes difference
> to Susan's knowledge? Fact 1 did hold at the time George formed
> the belief P,

RIGHT!

> and that seems enough for Susan to know that P
> on the basis of George's utterance, as in Case 2.

RIGHT!

> For if,
> counterfactually, Susan learned Fact 1, she could effectively eliminate
> the Chianti-possibility, and would certainly regard the host's
> SUBSEQUENT change of mind as irrelevant.³⁶

RIGHT!

So I guess we agree about this case.

> Problem C :

> This is what I regard the most serious one. In Case 2 you admit that

³⁶ My point here is that Susan's epistemic state should not be different between Case 2 and Case 3. However, as I explained in the earlier footnote, I was trying to argue here that, Susan did *not* know that P in *either* case.

- > Susan knows that P, while you also admit that if Susan came to know
- > Fact 2 (but not Fact 1), she would suspend her belief P. But this
- > makes
- > knowledge dangerously accidental. For that means that Susan's
- > knowledge
- > depends on her lucky ignorance.

Yes, I am committed to that

- > Besides, to admit this possibility is
- > to admit that one can cease to know something by virtue of knowing
- > something else. But that seems queer.

It does, I admit, seem a little queer. But not (I think) TOO queer. To use an example I used elsewhere,³⁷ If I learned (came to know) that some people calling themselves duck experts were in the neighborhood claiming that there were rare Russian Grebes flying around (in the area where I was bird-watching) that looked just like the Gadwall ducks I was claiming to have identified, I would probably stop being so certain that the ducks I saw were Gadwall ducks. I would certainly stop claiming to know they were Gadwall ducks (I couldn't, after all, distinguish them from what the people claimed were identical looking Russian Grebes). Yet, these people could well be imposters just trying to fool people with false stories about Russian Grebes (there are no Russian Grebes). So in this case coming to know something (that there were people claiming to be duck experts who said there were identical looking ducks, etc. etc.) took away my knowledge. If I learned some more (that they were imposters) I would regain my knowledge. If I remained ignorant of their presence, I would have retained my knowledge (since the [ir] presence was misleading).³⁸

³⁷ Dretske (1981a) p.368–9.

> In such cases we should rather
> conclude that he didn't know it from the beginning. On learning Fact 1
> (but not Fact 2), Susan herself would say, "Oh, then I didn't know it
> had really been a Bordeaux." And in saying so she is right. Isn't she?

No. She DID know it, but learning something (Fact 2, but not Fact 1) in case 2 she is "robbed" of her knowledge.

> I hope at least one of these deserves a serious consideration.

they certainly did deserve serious consideration. ALL your messages do.

Fred

date : Wed, 9 Aug 2006 08 : 58 : 32 - 0400

[again, what follows is Dretske's reply to my message which is included below]

Dear Masa,

Yes, we do seem to be reaching a point of diminishing returns. At the risk of appearing overly stubborn, though, a few quick responses to your latest questions.

³⁸ My response to this kind of example is that, if the self-claimed duck experts were so convincing and I would abandon my belief about the Gadwall ducks on meeting them, then the existence of such people would indeed rob me of my knowledge that the ducks I saw were Gadwall ducks. However, our belief, if it is *fully* believed, is not so easily abandoned. If I in fact know that they were Gadwall ducks, then upon meeting such people, I would, rather than abandoning the belief, form a *desire* for further investigation, the goal of which is the *higher-order knowledge*, to know whether I really knew that they were Gadwall ducks. See for the argument to the similar effect, through the compatibility of doubt and full belief, chapter 10 of Adler (2002).

On Aug 8, 2006, at 11 : 12 PM, mizumoto masaharu wrote :

> Dear Fred,

>

> About Problem A, I do not think I can convince you on this matter,

> so let me just ask you a question. It seems you are committed to

> either of the following two theses.

>

> (1) Being the only alternative entails being RELEVANT alternative.

> (2) Knowledge necessarily requires elimination of SOME relevant

> alternative.

>

> But I find neither of them is plausible. Are these really your theses?

Yes³⁹

> (I'm sorry for an elementary question.)

> I admit that the possibility of my being a brain in a vat can BECOME

> relevant if the skeptic ACTUALLY exists and challenges my belief.

> But if the skeptic is merely imaginary, the alternative's being

> relevant

> is also merely imaginary.

If someone says (I don't know why anyone would say this, but let us imagine that they say it as a result of applying Closure when they realize that what they already know--e.g., that they are sitting in a chair--implies that they

³⁹ The problem of admitting (1) and (2) is that, this is to commit us to the view that there is no such case where there is no relevant alternative to an arbitrary proposition p, which is incompatible with the thesis that whether some alternative is relevant or not is determined by the objective situation the subject is in. The latter thesis would say that, even if some alternative is the only alternative, whether it is relevant or not is not determined automatically, but depends on the surrounding facts.

are not a brain in a vat) that he knows he is not a brain in a vat, BEING a brain in a vat is (it seems to me) a relevant alternative. What else could the person who says or thinks he knows he is not a brain in a vat possibly be saying (or thinkinig) but that he can, somehow, rule out THAT possibility (that he IS a brain in a vat).⁴⁰

> About Problem B, we seem to agree that, in Case 3, Susan knows that P
> (the host served a Bordeaux at the dinner).⁴¹ But my point in this
> example
> was the transmission of information, and I am not sure why you can
> agree
> with me, given my understanding of your theory of information.
> There (in Case 3) the condition that holds between the source (George)
> and the receiver (Susan) is such that Fact 2 (George's believing that
> Chianti is a Bordeaux) still holds, but Fact 1 (the host would not
> serve
> Chianti) does not. IN THIS SITUATION, the Chianti-possibility is still
> relevant, since Fact 2 still holds, whereas it is not objectively made
> irrelevant by Fact 1, as was in Case 2 [according to Dretske, of course].

I think it IS made objectively irrelevant by Fact 1 since Fact 1 obtained at the time George drank the wine (and learned that it was a Bordeaux). You are right, this fact no longer obtains at the time George tells Susan that the wine was a Bordeaux, but this doesn't interfere with the transmission of information since this is a fact that has no bearing on the transmission of information TO George (from the wine, as it were) about the character of the wine. And the fact that conditions (about what wine it could be) have

⁴⁰ For more of his defense of the failure of the closure principle, see Dretske (2005).

⁴¹ Note that we merely "seem" to agree. My point in my last message was that Susan did *not* know that P in either Case 2 or Case 3. Thus here we only agree that George's utterance conveys the information P, though I believe Dretske cannot agree on this point in Case 3.

changed AFTER George tastes the wine do not affect what information reaches George (and, thus, what he knows) nor (therefore) what information he can communicate to Susan. Think of it this way: the fact that AFTER I look at the barns in the countryside (and am comfortably seated in my study) someone puts up some fake barn facades does not affect my knowledge that there was a barn in location L. There being no barn facades at the time I looked means I got the information that there was a barn in location L and therefore knew there was. Now when I go to tell someone that there was a barn in location L, the fact that there is NOW (unknown to me) a few barn facades in the neighborhood (making it impossible for anyone NOW to see that there is a barn in location L) does not affect MY knowledge (gained earlier) nor (as far as I can see) does it affect what information I can communicate to my listeners. After all, I would not now be saying what I am saying (that there was a barn in location L at time t) if (at the time I saw the barn, time t) there had not been a barn in location L.⁴² Given the times at which the information is communicated, the probability of there being a barn in location L at time t given that I said there was (at time $t+1$) is 1.⁴³

⁴² This analogy is not very effective. The equivocatory factor in Case 3 is Fact 2, which *has been there throughout*, while the equivocatory factor in this version of fake-barn case is introduced *after* his perceiving the barn. Besides, even without this dis-analogy, I do not think that his utterance “there is a barn” should be taken to convey the relevant information, given the existence of fake-barns at the time of the utterance. To claim that it does carry the information is to hold a fairly robust conception of information, which is independent of the epistemic states of the listeners. I *am* committed to such a robust conception of information, but Dretske’s conception of information was not like this. Otherwise Dretske would have to admit that in the original fake-barn case the subject indeed received the information that there was a (real) barn before him, *despite* the fake barns around him.

⁴³ Right. But given this robust conception of information, the probability of there being a (real) barn before the subject given the fact that there is a barn before him, is also (trivially) 1, whether or not the subject himself can appreciate it. And I believe this is what the thesis of *direct realism* requires. Direct realism in this sense is therefore almost equivalent to Gibsonian robust conception of information.

(Sorry to be going on so long about this)

- > Thus the condition between George and Susan is such that even if
- > there is a legitimate piece of information at the source it does not
- > reach the receiver because of the objective equivocatory factor
- > (Fact 2),
- > just as the fake-barn case where there is a legitimate piece of
- > information at the source (the fact that the barn is real), it does
- > not
- > reach the receiver (who perceives the fact) because of the objective
- > equivocatory factor (the existence of fake-barns) [again, according to
- Dretske's theory].

I think the existence of fake barns is an objective equivocatory factor, but I do not see why Fact 2 is an objective equivocatory factor. The fact that George (falsely) thinks that Chianti is a Bordeaux does not affect the transmission of information TO him (I think you will agree about this) or FROM him TO Susan. It is this latter fact about which we disagree.⁴⁴ You (I am beginning to understand) think that this false belief on George's part means that his saying "I had a Bordeaux" does not carry this information to Susan (even though he received this information from the wine) because he would have said this (given his false belief) even if he had had a Chianti.

Is this right so far?⁴⁵

If it is right, then this is the point we are sticking at. Maybe this was obvious to you all along. If so, I'm sorry! I am just beginning to understand it. I don't think this false belief interferes with the transmission of information from George to Susan (about what wine he had at time *t*) because given Fact 1 (at the time George tasted the wine) this is not a relevant possibility (for

⁴⁴ To be precise, as I have been suggesting, Mizumoto agrees that the information reaches Susan, but claims that Dretske cannot admit that, given his own theory.

⁴⁵ This is what I think Dretske's theory of information implies.

Susan) although, of course, she might think it relevant (if she didn't know Fact 1).

I'm going to stop here because I sense that our disagreement on this point (if this is, indeed, the basic disagreement) goes pretty deep. Deeper than I thought. And I can now (now that I've struggled through your cases) see why you say what you do--why, for instance, the information doesn't get to Susan. I no longer think it so clear (as I did at the beginning) that (given Fact 2) the information gets to Susan. It all depends on where and how we integrate Fact 1 into our understanding of the counterfactual (George wouldn't have said he had a Bordeaux unless he, in fact, had a Bordeaux).

Best,

Fred

On Aug 17, 2006, at 8 : 18 AM, mizumoto masaharu wrote :

Dear Fred,

Sorry again for a long message.

About the BIV skepticism, I admit that IF I SAY that I am not a brain in a vat, then the possibility that I am is relevant. But of course we can know many things WITHOUT saying we know. Besides, what I do not know in such a situation is merely the higher-order knowledge, the knowledge THAT I KNOW that I am not a brain in a vat. But I think many people have already responded in the similar way.

As for the transmission of information, let me first note that my point was the consistency of your view, rather than the disagreement of our intuition. Our intuition requires that in Case 3 Susan should receive the information from George, and come to know that P,⁴⁶ while the analogy with the fake-barn case suggests that, Susan cannot receive the information P.

Let me summarize the situation.

(i) In the fake-barn case the subject perceives the fact that there is a barn before him, but is said to fail to receive the information that there is a barn before him. This is counterintuitive. Why can the person who perceives the fact P fail to receive the information P?

(ii) In Case 3, as long as the analogy with the fake-barn case holds, Susan, who was told that P from George (a legitimate source of the information P) and thereby formed the belief P, would nevertheless fail to receive the information P, because of the objective equivocatory factors AT THE TIME OF the communication (in the case of the fake-barn case, at the time of the perception). We agree that this consequence is counterintuitive.

My diagnosis is ; why don't we admit that information is transmitted BOTH in the fake-barn case and in Case 3?

Let us go back to the very beginning of this correspondence.

In the first message I proposed the following analysis of knowledge.

A knows that p iff

- (1) A's belief p is caused by the information p, and
- (2) A is a source of information that p.⁴⁷

My assumption here is that, the immediate surroundings (objective equivocatory factors) do not affect the TRANSMISSION of information, but do affect whether the receiver knows or not, by affecting whether the receiver can

⁴⁶ Note again that I am *not* (*and should not be*) committed to the view that Susan comes to know that P. I admit only that George can convey the relevant information.

⁴⁷ Naturalists may worry here that this theory of knowledge would make non-human animals totally ignorant, since they cannot speak. But this is not implied by the present theory. What is implied is only that non-human animals without language can have only *coarse-grained knowledge* that their communication tools or actions can convey.

be a legitimate source of the information or not. Imagine that the subject in the fake-barn case, call him A, tells (say by cell phone) another person B that Q (there is a barn before A). According to the present view, A himself receives the information Q from the fact Q, thereby forming the belief Q, but does not know that Q. Why? Because he will fail to transmit that information to B.

Also, in Case 3, Susan does receive the information P, as long as George is a legitimate source of the information P. On the other hand, in Case 1 (your original example) George cannot convey the information P to Susan, because of the lack of Fact 1 [and the presence of Fact 2] at the time he formed the belief P. And that is why, according to this view, George does not know that P in that case.⁴⁸ This does not, however, assure that Susan knows that P in Case 3. When Susan tells still another person, say Tom, that P, the facts holding AT THE TIME SUSAN FORMED THE BELIEF P, or at the time George told her so, might be relevant for Tom, and she might thereby fail to transmit the information P to him.

Thus this modification of the definition of knowledge seems to solve two problems without changing much of your theory, while at the same time resolving a paradox, that the person who knows that P may fail to convey the information P by his sincere utterance "P", or the "cognitive cul-de-sac".

Masa

⁴⁸ This is a misleading statement. In Dretske (1982)'s second example George fails to convey information to Susan *because he has forgotten that he had a Medoc*. As I shall admit in the next message, if I mean here the *first* example of Dretske (1982), I should not have said that George does not know that P. There George can indeed transmit the information. I think I had forgotten the difference of Dretske's original examples.

date : Thu, 31 Aug 2006 10 : 33 : 33 - 0400

Dear Masa,

I have been pondering your latest message. Let me ask just one question. That will help me better understand the source of our disagreement.

Consider the (Al Goldman) example of the man who had the false belief that wolves were dogs, but was otherwise quite expert on identifying dogs. He sees a dachshund and correctly and reliably identifies it as a dachshund. Goldman's intuitions (and mine) are that the man knows that the animal he sees is a dog. Apparently your theory leads you to deny this since the man is not a "source" of information (that the animal is a dog). For all a listener can tell the animal could have been a wolf (the man would have said it was a dog even if it was a wolf).

If you do deny that the man knows the dachshund is a dog, then this is where I think our "hang up" is.

Best,

Fred

On Sep 6, 2006, at 9 : 50 PM, mizumoto masaharu wrote :

Dear Fred,

I certainly agree with your (and Goldman's) intuition that the person knows that the animal is a dog. Otherwise I would have to admit that he knows that the animal is a dachshund WITHOUT knowing it is a dog.⁴⁹ So I made a mistake. I should not have suggested that in your original Chianti case, George does not know that he had a Bordeaux at that night.⁵⁰ (My proposal must preserve our intuition about knowledge, while changing only our ex-

⁴⁹ Since we know that being a dachshund entails being a dog, admitting this is to admit the straightforward failure of the closure principle.

planation of the transmission of information.)

So let me try again.

The subject A in the dachshund case can transmit the information that there is a dog before me to the person B, because unlike the fake-barn case he is reliable as a source of that information in that even if he obtained further information (e.g., wolves are not dogs), he would not withdraw his report. Analogously, George can transmit to Susan the information that he had a Bordeaux at the night,⁵¹ and therefore George does know that he had a Bordeaux, although this does not assure that Susan can know that too. Indeed, if Susan obtained the surrounding information about George's mistaken belief, she would not hold the belief anymore, so she cannot be a good informant of that fact (hence she does not know).

This also explains why, in Case 3, the fact of the host's change of mind (that Chianti is a good wine) AT THE TIME of George meeting Susan is irrelevant. Even if she obtained the information about that fact [the fact about the current taste of the host], that would not make her withdraw her own report of what George had at that night.⁵²

⁵⁰ This is in fact no major change of my view, since what I should have done was to properly distinguish the two examples of Dretske (1982). I should have said that George knows that P if I meant there the first example, but George does not know if I meant the second example.

⁵¹ This is because, even if George obtained the information that Chianti is not a Bordeaux, he would not withdraw his report that he had a Bordeaux. Note that I assume here the first example, where George has not forgotten that he had a Medoc. On the other hand, if he had forgotten that he had had a Medoc, then he would not be a proper source of that information any more (there he would not be able to report that he had a Bordeaux).

⁵² According to the present proposal, however, if Susan obtained the information about Fact 2, she would indeed retract her own report, so that she is not a legitimate informant of what George had at that night, and therefore she does *not* know that P in Case 3 either, after all.

Then we agree in most of the cases about knowledge attribution, perhaps except the cases of lucky ignorance (or false rumors) and the brain-in-a-vat case, while the advantages (or so I think) I mentioned in the last message still remain. But this time it seems that the remaining disagreement is indeed the RESULT of the difference of the views on the transmission of information (and the corresponding difference of the definition of knowledge).⁵³

Best regards,

Masa

date : Mon, 11 Sep 2006 09 : 17 : 11 – 0400

Masa,

Yes, I agree, our disagreement comes down to a difference in our views about the transmission of information. In your last response, the part I underline (below) is something that (given my views about information) I would have to disagree with. Even if A would not withdraw his report (that the animal was a dog) if he obtained further information (that wolves are not dogs), that does not alter the fact that, given what he actually knew at the time, he would have said exactly the same thing if the animal had been a wolf. So his utterance (on my account of information) doesn't carry the information that it was a dog. The probability that it was a dog, given that he said it was a dog, is not 1.

⁵³ Thus this formulation of the condition of transmissibility of information (that one can transmit the information P iff one would not retract the report or utterance "P" whatever further information he obtained), together with the new proposal of analysis of knowledge (based on the transmissibility of information), is in effect equivalent to the analysis of knowledge according to which (assuming that one can properly report or assert that P iff one properly believes that P) knowledge is belief that would not be abandoned whatever further information was acquired. Elsewhere (Mizumoto 2006) I formalized this analysis by means of a formal theory of belief change.

I do like your way of doing things though. It seems to handle some problems (relating knowledge and information) quite elegantly.

Fred

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