teorema
Vol. XXXIII/3, 2014, pp. 149-158
ISSN: 0210-1602
[BIBLID 0210-1602 (2014) 33:3; pp. 149-158]

Revised Tracking: Cure is Worse than the Disease

Fred Adams

I. INTRODUCTION

I am pleased to be invited to contribute an essay on this new and important book by Zalabardo. In this essay, I will suggest that the reasons Zalabardo gives for rejecting Nozick's tracking theory may not withstand scrutiny, and the replacement theory of Zalabardo may have more problems than it solves. Zalabardo gives several reasons to find Nozick's theory wanting. He replaces Nozick's theory with a probabilistic version of tracking. I will suggest that the problems for Nozick's account discussed by Zalabardo are not as bad as he might think. I will also suggest that replacing Nozick's counterfactual-based account with a probability-based account removes (for me) most of the interest in tracking theories.

II. THE REPLACEMENT VIEW

Famously, Nozick's [Nozick (1981)] tracking theory of knowledge for non-inferential knowledge is as follows. *S* knows that *p*, when (and only when):

1. *p* is true
2. *S* believes that *p* via an appropriate method *M*
3. If *p* were not true and *S* were to employ method *M*, *S* would not believe that *p*
4. If *p* were true and *S* were to employ method *M*, *S* would believe that *p*.

Conditions (3) and (4) are the tracking conditions ((3) has come to be called the "sensitivity" condition and (4) the "adherence" condition).

Zalabardo [Zalabardo (2012), p. 113] suggests replacing Nozick's sensitivity condition with a probability condition and dropping Nozick's adherence condition.[1] Zalabardo's replacement condition for (3) is that in order for *S*'s belief that *p* to track the truth of *p*, it must satisfy the belief ratio where the probability that *S* would believe *p* given *p* is higher than the probability that *S* would believe *p* given ¬p.

Calculation involves determining the belief ratios:

P (Bel (*p*) / *p*) to *P* (Bel (*p*) / ¬*p*) should be high. It is the relative ratios of these probabilities (not their absolute values) that is crucial for his view of tracking. When something is true, your probability of believing the false had better be lower than your probability of believing the true, on this account.

At first sight, it seems right that when Tom knows that Mandela died, the probability that he believes Mandela died given that Mandela died had better be higher than the probability that he believes Mandela died given that Mandela is alive. But my worry is that this is not nearly strong enough for truth tracking. On traditional tracking accounts [Dretske (1971, 1981)], Nozick [Nozick (1981)] if Tom even *might* still believe Mandela is dead when Mandela is alive, Tom doesn't know Mandela died.[2] Traditional accounts of truth tracking forge a lawful connection between the facts and the true belief. That lawful connection is the glue that gives tracking theories their appeal [Adams & Clarke (2005), Barker & Adams (2010)]. To diminish that lawful connection, it seems to me, will rob tracking theories of their strongest virtue.

Here is a nice example of how Zalabardo illustrates his account with the classic Judy/Trudy example of Goldman's. In the example, Sam knows Judy well, but does not know Judy has an identical twin Trudy (undistinguishable from Judy by sight by Sam). Does Sam know it is Judy across the street? For Zalabardo [Zalabardo (2012), p. 120] the question this case raises is whether the possibility of Trudy being across the street reduces the sensitivity of Sam's belief, "and hence a significant increase in the denominator of the tracking ratio." To calculate sensitivity we consider what happens to Sam's belief that it is Judy, when it is not Judy. The view calculates the sensitivity of Sam's belief as follows:

P (¬Bel (Judy) / ¬Judy) =

P (¬Bel (Judy) / ¬Judy & ¬Trudy) . *P* (¬Trudy/¬Judy) +

P (¬Bel (Judy) / ¬Judy & Trudy) . *P* (Trudy/¬Judy)

When it is neither Judy nor Trudy across the street, *P* (¬Bel (Judy) / ¬Judy & ¬Trudy) will be very high. And were it Trudy instead of Judy, *P* (¬Bel (Judy) / ¬Judy & Trudy) is very low, since Sam could not distinguish Trudy

from Judy and might well believe it was Judy across the street. As *P* (Trudy / ¬Judy) approaches 0 and P (¬Trudy / ¬Judy) approaches 1, the value of *P* (¬Bel (judy) / ¬Judy) will approach the high value of P (¬Bel (Judy)/-Judy & ¬Trudy). As *P* (Trudy / ¬Judy) approaches 1, and *P* (¬Trudy/¬Judy) approaches 0, the value of *P* (¬Bel (judy) /¬Judy) will come closer to the low value of *P* (¬Bel (Judy) /¬Judy & Trudy).

We can see some of the virtues of tracking accounts, even in this brief snapshot of the view [Adams, Barker, & Figurelli (2013)]. For example, it is a contrastive account. Does Tom know it is Judy, rather than someone else? In addition, it differentiates relevant from non-relevant alternatives. If Tom knows it is Judy and its being Trudy is a relevant alternative (because he can't distinguish Trudy from Judy, and Trudy is in town), then he won't be able to know it is Judy rather than Trudy, by look alone. If Trudy is not in the contrast class, but others are, then Tom must know it is Judy rather than one of these others. And if the others don't look like Judy, it should be easier for Tom to know it is Judy.

III. Omission of Reasons or Methods to Zalabardo's Tracking Theory

To my mind, there is a glaring omission to this tracking account. The account gives no details on why a person forms his/her beliefs. There is no appeal to the person's *reasons* [Dretske (1971)] or *methods* [Nozick (1981)]. Indeed, Zalabardo [Zalabardo (2012), p. 45] proclaims: "The account that I am going to develop will not adopt this relativization [to method_{fa}]. Our notion of when a belief tracks the truth won't make explicit reference to the method with which the belief has been formed." This, I maintain, is a serious break with truth tracking.[3]

With no reliance on Dretske's reasons or Nozick's methods, a tracking account would make it look like magic that beliefs correspond with the truth, when they do. Why on earth would one be able to avoid believing something just because it was false? Or how on earth could one adjust beliefs so that one believes what is true, when it is true? Without describing the why and the how of the belief formation, things will be intolerably mysterious or go horribly wrong.

Let's continue with the Judy/Trudy case. Tom's belief that Judy is across the street doesn't just happen. It has a basis. There is a reason why he believes or doesn't believe Judy is there. Did someone tell him? Did she text him? Does he see her? Each of these can have differing degrees of reliability and that reliability can change on different occasions. So without adding details, I don't even see how the probability distribution above can answer the

question whether Tom knows it is Judy across the street on a specific occasion. The account tells us some of the general parameters of an answer but, without more details, it doesn't give us the specific pronouncement on a specific case.[4]

Let's go further. Why does Tom believe it is Judy across the street? Let's say it is by her look. Tom knows what Judy looks like these days (her hair style, hair color, facial features, and so on). So his reason for believing it is Judy is that it looks like Judy. Now, if that is his reason for believing it is Judy (his method of coming to that belief), then in the circumstances where it is Judy and Trudy is thousands of miles away (P (Trudy/¬Judy) is circumstantially zero), Tom knows its Judy. He knows by her look. He would not mistake her for Trudy because Trudy is not around and thus not a relevant alternative. Now one more thing: suppose that no one else in the vicinity looks enough like Judy to cause Tom to mistakenly believe that person to be Judy. In this case, we get that nomic connection I mentioned. Following Dretske [Dretske (1971)], to Tom, it wouldn't look like Judy across the street, unless it was Judy. This is Tom's reason R for thinking it is Judy. Given that his belief that it is Judy is based upon reason R, Tom wouldn't believe it was Judy unless it were Judy. This seems to me stronger than Zalabardo's probabilistic rendering and the stronger account seems to me to be what tracking accounts need.

I also find that Zalabardo's theory gives the wrong result on the famous Kripke unpublished version of the barn façade example. Elsewhere [Adams & Clarke (2005) & Adams, Barker, & Figurelli (2013)] I argued that in the Kripke Red-Barn case, tracking theories do not have the result Kripke suggests. I argued that on Dretske's view [Dretske (1971, 1981)] one can and does know of the red barn one sees that the barn is red and, since one knows it is a red barn, one knows it is a barn.[5] I also explained that Nozick's [Nozick (1981)] account can give the same result, contrary to Kripke's suggestion. Importantly, the reason Kripke gets the wrong result is he overlooks the reasons (or methods) for which one believes. I won't go through all the details for all three versions of the tracking theories here, but just take Dretske's [Dretske (1971)] account. If the reason for thinking there is a barn is that one knows there is a red barn, then one will know there is a barn. Let one's reasons for thinking there is a red barn is that there is something that both is a red-looking and barn-shaped building in the field. Equipped with that reason R, and Kripke's stipulation that in these circumstances there can be no red-looking barn facades, R would not be the case unless there were a red barn. So S knows there is a red barn via reason R.

Now Zalabardo changes it so that the genuine barn that cannot be faked is blue, not red,[6] but this doesn't change the nature of the case. In the above, one can just change all the "red"s to "blue"s, and one sees how my argument runs.

I'll now explain how Zalabardo arrives at his theory's judgment that one lacks knowledge that there is a blue barn and hence a barn. For the original non-Kripkean barn façade case where one is looking at a real barn and believing that it is a barn, but there are indistinguishable barn façades around of varying color things go this way.

$$P(\neg \text{Bel}(\text{barn} / \neg \text{barn}) =$$

$$P(\neg \text{Bel}(\text{barn}) / \neg \text{barn} \,\&\, \neg \text{façade}) \,.\, P(\neg \text{façade} / \neg \text{barn})$$

$$+$$

$$P(\neg \text{Bel}(\text{barn}) / \neg \text{barn} \,\&\, \text{façade}) \,.\, P(\text{façade} / \neg \text{barn})$$

Hence, when there are no barn-looking facades in the vicinity, one is not likely to mistake a non-barn for a barn. So the P (¬Bel (barn /¬barn & ¬façade) is low. But the P (¬bel (barn) / ¬barn & façade) is high as P (façade & ¬barn) rises. So one may believe there is a barn when it is only a barn façade, and hence one doesn't know the barn one is looking at is a barn.

Now in Kripke's twist on the example, red barns nomically cannot be faked. Remember that Zalabardo has changed the color so that it is the blue barns that cannot be faked (the red ones can be). Zalabardo points out that Kripke's twist on the example means that his account cannot claim that the problem arises when P (bluefacade/¬barn) is high. This cannot happen because of Kripke's stipulation that in these circumstances there are nomic reasons why it is impossible to fake a blue barn). So this probability not only is not high, it is zero.

Here is Zalabardo's [Zalabardo (2012), p. 122] explanation of why one still does not know there is a barn or a blue barn in this case. "I want to suggest that the reason why the existence of red barn facades generates the intuition that I don't know BLUEBARN is that the existence of red barn façades increases the probability of the existence of barn façades of any color. This, in turn, increases the value of P (BLUEFACADE / ¬BLUEBARN)."

But this cannot be right. The objective, physical probability (or likelihood) of a blue barn façade is zero. The fact that the observer doesn't know this doesn't change this fact. I believe that a test of an acceptable tracking theory should agree that one can and does know that there is a blue barn in the field when Kripke's stipulations are met. And so while Zalabardo's account can "accommodate the intuition that I don't know this proposition," this, I maintain, is the wrong result.

Nonetheless, the Kripke example is quite controversial, even though I think and have argued that it shouldn't be. It is crystal clear that one does have knowledge on a proper understanding of the conditions Kripke sets and how tracking works. Anyway, I'll now suggest that Zalabardo's account still

gives the wrong answer even on examples that are not only not controversial but that muster wide agreement.

So let's consider Dretske's Rockaford example [Dretske, (1971)]. Tom wants a new Porsche but can't afford one. However, his rich friend Rockaford offers to buy Tom a Porsche, if Tom doesn't win the lottery (a fair lottery). Tom doesn't win and Rockaford does buy Tom a Porsche. Sue knows only of the arrangement, but not of the results of the lottery. When Sue sees Tom driving his new Porsche, she correctly assumes that he got it from Rockaford. But does she know? Dretske argues, convincingly to my mind, that tracking theories give the answer "no." What does Zalabardo's account say? If we run the numbers, it looks to me as though he has to say yes, Sue knows that Tom got the Porsche from Rockaford. It does on his account if the probability of Sue's believing it was Rockaford tracks, and it tracks if the probability of her not believing it was Rockaford (when it was) is much lower than the probability that she would believe it was Rockaford on the probability that Tom won the lottery. Since the probability of his winning is so low, Sue is not likely ever to believe that winning the lottery is how Tom got his Porsche. So it sure looks to me as though her belief tracks the truth on Zalabardo's account.

$$P\ (\neg\text{Bel (Rockaford)} / \neg\text{Rockaford}) =$$

$$P\ (\neg\text{Bel (Rockaford)} / \neg\text{Rockaford} \ \&\ \neg\text{lottery})\ .\ P\ (\neg\text{lottery} / \neg\text{Rockaford})$$

$$+$$

$$P\ (\neg\text{Bel (Rockaford)} / \neg\text{Rockaford} \ \&\ \text{lottery})\ .\ P\ (\text{lottery} / \neg\text{Rockaford})$$

Now if Rockaford doesn't give Tom the car and Tom doesn't win the lottery, Sue won't see Tom driving the Porsche. She won't believe Rockaford gave Tom the Porsche, when it is false that he did. And when she sees Tom driving the Porsche, she will surely believe it was Rockaford that gave it to him, not that he won the lottery. So the probability of her not believing it was Rockaford is so low relative to her believing that it was the lottery, that it will track the truth on Zalabardo's account. The only problem is that she doesn't know it was Rockaford. It was a fair lottery and Tom had as good a chance to win as anyone else with a ticket. Sue doesn't know the outcome of the lottery, so she doesn't know it was Rockaford who gave Tom the Porsche. No matter how unlikely it may be that Tom got the Porsche by winning the lottery, that is a possibility that Sue has not closed off by anything she sees or knows.

IV. ZALABARDO'S REJECTION OF NOZICKIAN TRACKING

One case where failing to pay attention to method causes Zalabardo to claim incorrectly that Nozick's theory fails, is Goldman's Dachshund/wolf case.[7] So briefly, the case is as follows. Oscar recognizes Dachshunds as dogs. But Oscar improperly also believes hyenas to be dogs. So while it is true that Oscar meets Nozick's condition (4), he fails condition (3). Sometimes when something is not a dog, Oscar believes it is a dog (when it's a hyena). So his beliefs are not properly sensitive, and he fails to have knowledge. Zalabardo [Zalabardo (2012), p. 127] says: "Oscar's belief that there is a dog in front of him is not sensitive, as he would have it if it were false. On Nozick's construal of truth-tracking, Oscar's belief doesn't track the truth. The same situation obtains on my construal, since Oscar's tendency to mistake hyena's for dogs, and the probability that there is a hyena in front of him if there isn't a dog, will clearly reduce the sensitivity and tracking ratio of his belief: the probability that he believes DOG if DOG is false will be unacceptably high."

Let me come to Nozick's defense. Just because Zalabardo doesn't like to relativize tracking to methods, doesn't mean Nozick doesn't too. So it is unfair to object to the Zalabardo version of Nozick, as if it were Nozick himself. Nozick surely would handle this case in the following way. Oscar knows what a Dachshund looks like (long body, short legs, long nose, long tail). Oscar also knows that Dachshunds are a kind of dog. Oscar would never mistake a Dachshund for a hyena by sight. So when we consider whether Oscar knows there is a Dachshund in front of him (and therefore a dog), Nozick's account would ask how Oscar comes to his belief. What is his method? Is it by believing it is a Dachshund by its look? Let's suppose that it is, since this is the way Goldman set up the example of perceptual knowledge. Then, contrary to Zalabardo's claim, Nozick's theory fits the case. Using the method of belief formation (believe something that looks like a Dachshund dog is a Dachshund dog), Oscar's belief tracks. He wouldn't believe it was a Dachshund kind of dog, if it were not a Dachshund kind of dog. And if he employed his method, he would believe it is a Dachshund dog if it were (was). Since it is a Dachshund, Oscar knows.

Now, interestingly, Zalabardo [Zalabardo, (2012), p. 127] says his own account "has the resources for ascribing the status of knowledge to beliefs that don't track the truth….I want to argue that Oscar knows DOG inferentially, on the basis of evidence provided by another proposition whose truth he does track." Then what Zalabardo [Zalabardo, (2012), p. 127] does is exactly what I did above, for Nozick. He turns the proposition in question into one that includes the phenotype of a Dachshund dog: "Let me abbreviate the proposition that a creature with these features before Oscar as DACHSHUNDLIKE. The

proposal is that Oscar knows DOG inferentially on the basis of evidence provided by DACHSHUNDLIKE, which he knows, in turn, by truth tracking."

Now I won't go through it, but Zalabardo then demonstrates the probability distributions necessary for his account to give this result and argues that the case meets his conditions for Oscar to have this knowledge.

I have two further points to make. First, Nozick has the very same resources to handle this case as Zalabardo (as I explained above). So Zalabardo gives no reason to prefer his account to Nozick's, though he seems to suggest otherwise. Second, this case has exactly the same structure as Kripke's redbarn case. So Zalabardo has painted himself into a corner. Either he has to accept that one can know REDBARN and inferentially know BARN, just as he argues is the case for Oscar and DACHSHUND and DOG. (Remember, Zalabardo switches the non-fakable barn to BLUEBARN.) Or he has to go with his original explanation in his BLUEBARN[8] example, and deny that one can know it is a BLUEBARN and thereby that it is a BARN. But he cannot have it both ways. He cannot say one thing about the Dacshund/dog case and something different about the BLUEBARN/barn case. Now what this tells me is that something has gone significantly wrong in Zalabardo's account or his application of his account. I am suggesting to you (and him) that it is his rejection of the notion of the reason (or method) upon which one forms his/her belief, and that this ingredient is not just an accessory to tracking, but lies at the heart of tracking!

V. CONCLUSION

As I said in the opening, this is an important book. Zalabardo does a nice job of defending reliability theories/tracking theories against objections and skepticism. I find his arguments plausible and important. While I'm critical of his own version of tracking theories and his rejection of Nozick's version, as everyone knows, in philosophy criticism is often the sincerest form of flattery.[9]

Department of Linguistics & Cognitive Science
University of Delaware
Newark, DE 19716 USA
E-mail: fa@udel.edu

NOTES

[1] The adherence condition doesn't drop out completely because the way Zalabardo constructs his sensitivity ratios adherence, as he says, "shows up in the numerator"[Zalabardo (2012), p. 134].

[2] For Dretske this would mean one's reason for belief is not 'conclusive' and for Nozick it would mean one's belief-forming method doesn't track the truth.

[3] To his credit, Zalabardo spends considerable effort in chapter 3 discussing various objections to Nozick's account of methods from the literature. I think these can be met, but won't address the objections here. Zalabardo apparently does not think they can be met and they disappear from explicitly being part of his account. I would maintain that they almost certainly are implicit in much of his discussion of tracking, however.

[4] The reader will notice that Zalabardo often gives no or few specifics in cases and tells us only what the belief ratios must be to make it possible to know — as in the Judy/Trudy example.

[5] I first argued this point as an invited discussant to the Rutgers Epistemology Conference (2001). Dretske himself pointed out that Kripke's red barn example was not a counterexample to his tracking account [Dretske (2005), footnote 4].

[6] I wish folks would stop changing the color: Zalabardo makes the non-fakeable barns blue rather than red.

[7] I also wish they would stop changing the animals: Zalabardo changes 'wolf' to 'hyena,' in Goldman's Dachshund-wolf example.

[8] Remember he just makes the non-fakable barn blue where Kripke has it red.

[9] Special thanks to John A. Barker for helpful e-mail exchanges, and to Luis Valdés for putting this opportunity together.

REFERENCES

ADAMS, F. & CLARKE, M. (2005), 'Resurrecting the Tracking Theories,' *Australasian Journal of Philosophy*, vol. 83, pp. 207-221.

ADAMS, F., BARKER, J.A., & FIGURELLI, J. (2012), 'Towards Closure on Closure,' *Synthese*, vol. 188, pp. 179-196.

BARKER, J.A. & ADAMS, F. (2010), 'Epistemic Closure and Skepticism,' *Logos & Episteme*, vol. 1, pp. 221-246.

DRETSKE, F. (1971), 'Conclusive Reasons, '*Australasian Journal of Philosophy*, vol. 49, pp. 1-22.

— (1981), *Knowledge and the Flow of Information*, Cambridge, MA.: MIT/Bradford.

— (2005), 'The Case against Closure, in Steup and Sosa 2005, pp. 13–26.

NOZICK, R. (1981), *Philosophical Explanations*. Cambridge, MA.: 1981.

STEUP, M. & SOSA, E. (eds.) (2005), *Contemporary Debates in Epistemology*. Malden, MA: Blackwell Publishing.

ZALABARDO, J. (2012), *Scepticism & Reliable Belief*, Oxford: Oxford University Press.

RESUMEN

Este artículo considera las principales razones por las que Zalabardo rechaza la teoría del conocimiento en términos del rastreo de la verdad propuesta por Nozick. Considera también la teoría de reemplazo que Zalabardo prefiere – una explicación probabilística del rastreo de la verdad. Sugiero que las razones que se aducen para rechazar la explicación de Nozick no resisten un examen detallado y que la explicación que reemplaza tiene sus propios problemas. De este modo, este artículo defiende al final la teoría del conocimiento en términos del rastreo de la verdad propuesta por Nozick.

PALABRAS CLAVE: *contrastivo, rastreo probabilístico, alternativas relevantes, sensitividad, rastreo, Kripke, Nozick*.

ABSTRACT

This paper considers the main reasons Zalabardo rejects Nozick's tracking theory of knowledge. It also considers Zalabardo's preferred replacement theory—a probabilistic tracking account. I suggest that the reasons given for rejecting Nozick's account do not withstand scrutiny and that the replacement account has problems of its own. So, in the end, this paper defends Nozick's tracking theory of knowledge.

KEYWORDS: *Contrastive, Probabilistic Tracking, Relevant Alternatives, Sensitivity, Tracking, Kripke, Nozick*.