Some thoughts on Kripke’s puzzle about time and thought

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Dedicated to the memory of Horacio Arlo Costa

Kripke [K] formulates the following puzzle.

At any moment of time, Kripke might be thinking of a certain set of times. For example, the set of all times when TV was unknown. Or the set of all times when interplanetary travel will be commonplace and the like. Kripke proceeds.

However, there is a problem: suppose I think at a certain time $t_0$ of the set $S_0$ where $S_0$ contains all times $t$ at which I’m thinking of a given set $S_t$ of times, and $S_t$ does not include $t$ itself. In conventional notation:

$$S_0 = \{t|S_t \text{ exists } \& t \notin S_t\}$$

Now, I am thinking of $S_0$ at a certain time $t_0$. Is $t_0$ a member of $S_0$ or not? The reader can fill in the resulting paradox for herself.

Before addressing Kripke’s problem, let us turn to another Harvard philosopher, namely Hilary Putnam who is famous for not being able to distinguish a beech from an elm. Suppose that Putnam is looking at a tree in a friend’s backyard and says, “I think that tree might be a beech.”

The friend responds, “Do you mean to say that my tree is a member of the set of all beech trees?” and Putnam responds, “Yes, just that. I think your tree is a member of the set of beech trees.”

Now Putnam does not know whether the tree in question is a beech or not. May we nonetheless say that Putnam is thinking of the set $B$ of beech trees and wondering if the tree in question belongs to $B$?
Surely yes. Putnam does not need to be able to tell a beech tree by sight in order to think of the set B, just as we can think of Aristotle without having the ability to recognize him by sight. A chain extending from us to Aristotle enables us to think of him, and the community of horticulturists enables Putnam to think of the set B. He can just say the word “beech” or think it, and he thinks of B.

The work of deciding on the denotation of the word “beech” is done by society and it is society which helps Putnam “think of” the set of beech trees by just using the word “beech”. There is a linguistic division of labor. Putnam thinks the word “beech” and the community sees to it that he is thinking of the set of beeches.

For another example, I can speak about the set of physicists currently at CERN without knowing whether my friend Pran Nath is currently at CERN or not. If he is, then he is a member of the set I am thinking about and if not then not. I do not need a mental image of all the physicists lined up in a row, nor do I need to know whether Pran is at Cern. The community does part of the work for me by deciding who is to be counted as a physicist and Pran does part of the work by being at CERN or by not being at CERN. All I need is the phrase “the set of physicists currently at CERN.”¹

In Putnam’s case, Putnam does not play any role in deciding what a beech tree is and in my case I do not play a role in deciding what the word “physicist” means or who is at CERN. And it is Putnam’s non-interference with the meaning of “beech” and my non-interference with physicisthood that enables us to use the word and the phrase to think of something.

Before returning to Kripke’s puzzle, let us consider another, practical problem. Mr. Smith wants to listen to a lecture by Kripke, but it turns out that the room in which Kripke is speaking is full. However, CUNY has considerately provided rooms A and B in which a video transmission of the lecture can be heard. Smith goes into room A and starts listening when he suddenly realizes that there a problem. It is Thursday evening, and Smith is only permitted by his religion to listen to a lecture on a Thursday if the room in

¹It is not clear to me what Kripke’s notion of ‘thinking of something’ is. I have used an approach where syntax is an intermediary to semantics which is then used to think of things.
which he is doing the listening has an odd number of people in it (including Smith himself). Unfortunately (and Smith counts) there are 20 people in room A including Smith. Clearly Smith cannot stay in room A.

But then he looks across the hall and sees that room B only has 11 people in it. ‘Aha!” says Smith and proceeds to room B. He sits down and starts to listen. But after a minute or two his conscience starts to trouble him and he counts the number of people in room B. The number, alas, is 12. Clearly Smith cannot stay in B and proceeds back to A which, he can now see, only has 19 people. We need not trouble ourselves more with Smith’s quandary. Perhaps he just goes home. Or perhaps he pays someone in A to move to room B.

Smith’s problem is a convoluted version of a simpler problem. Can I enter an empty elevator? Yes, if all I ask is that the elevator be empty prior to my entering it. But if I demand that the elevator be empty after I have entered it, then I am going to be frustrated.

We do have occasion to worry that we are not able to enter a full elevator, especially if we are late for class. But not many of us worry about not being able to enter an empty elevator.

As for Smith, it is quite likely that had Russell written to Frege about Smith (rather than about Russell’s paradox), Frege might not have been particularly concerned. He might just have advised Smith to convert to a more practical religion.

Let us now return to Kripke’s problem. Let us assume that at each moment of time, Kripke is mentally uttering a word or phrase to himself. Perhaps the phrase is, “the set of all times when TV was unknown.” Let p be the phrase and TVU be that set. The meaning M(p) of p is TVU and by thinking p, Kripke can think of TVU.

Very possibly Kripke does not know exactly when TV became known (known to how many?) but he can think of the set TVU just by mentally uttering the phrase p.

The meaning function M such that M(p) = TVU is determined by society, i.e., by people including Kripke, but many many others as well, and certain
facts about television.

But now what happens if Kripke utters “S₀” to himself at time t₀? What set is he thinking of? The answer to that is presumably, M(S₀). We have the phrase “S₀” and all we need now is the function M. We can then look to see if t₀ ∈ M(S₀).

The trouble is that if at time t₀ Kripke had not thought “S₀” but thought p instead, then t₀ would have been in the value M(S₀). For M(p) as a set of times would have been empty. But Kripke unwisely did not think of the rain. Instead, he thought “S₀” and by thinking “S₀” he put t₀ out of M(S₀). But no, by putting t₀ out, he put it back in, etc. etc.

The fact that Kripke is thinking “S₀” is not the problem. The problem lies in the fact that Kripke is interfering with the meaning function M by thinking “S₀”.

In particular, if Kripke is uttering “S₀” to himself at time t₀, does M(S₀) have the property of containing t₀? Clearly the rest of us cannot help Kripke here, he will have to make up his own mind about M, just as Mr. Smith had to make up his mind whether to go home or pay someone to move from room A to room B, or perhaps convert to some other religion.

In sum, are Kripke’s troubles any worse than Smith’s? I am not convinced that they are. Let me now present a baby result which generalizes Kripke’s examples of TV and interplanetary travel. In both cases, Kripke was able to make use of society’s denotation of certain phrases by leaving the meaning function alone.

Let M be a function which takes a moment t of time and a phrase p to produce a set. M may not depend on t at all. For example M(p,t) where p is “the set of all times when TV was unknown” does not depend on t at all – it is not indexical. But we will allow indexicality. Thus if Humpty Dumpty says, “from now on “horse” means a cow” and we allow him this indulgence, then after Humpty Dumpty’s remark, we can think of the set of cows just by using the word “horse”. So we allow M to depend on certain data, like Humpty Dumpty’s remark about the word “horse”. If Kripke uses the function M to think of some set, he can use his own behavior prior to the moment his usage of some phrase p.
So let M be such a meaning function M(p,t,d) where p is a noun phrase, t is a time, and d are some data about the world (but only prior to times before t) and the thoughts of everyone including Kripke prior to time t. Thus if two sets of data d and d’ agree on all sets of times up to but not including t, then M(p,t,d) and M(p,t,d’) are the same.

Suppose now that Kripke decides to think “S₀” at time t₀. That fact is not part of the data at time t. So M(S₀, t₀, d) is already determined and either contains t₀ or does not. What Kripke thinks at time t₀ is not part of the data, and does not affect M, but he certainly is free to use an already existing M to think whatever he likes. That Kripke is thinking “S₀” is certainly allowed to be an argument to M, but is not allowed to interfere with M itself.²

**Conclusion:** Can I enter an empty elevator? Yes, I can!


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²What if we want M to be able to depend on physical facts like the sun turning into a giant red star, after time t? We can accommodate such a need by making M depend on two kinds of data, linguistic data d_l up to but not including time t, and physical facts d_p including those from times after t.