Referential Dependence in Language and Mind

Lecture 4.

Failed Names and Fictional Names

Hans Kamp

University of Stuttgart University of Texas, Austin

Advice to the reader

The slides for Lecture 3 that were posted last week contained those devoted to *Vulcan*, the main topic of Lecture 4. I have left those (slightly improved) in the present bunch of slides. So there is a big overlap between this first part of the present bunch (sl. 3 - 46) and the slides for Lecture 3.

The second part of the present bunch is about truth conditions for sentences and discourses that contain fictional names and an ontology for fictional characters. In Lecture 4 I only had time to briefly mention the main points of this, highlighting the differences with failed names like *Vulcan* as wall s the similarities. The second part of the slides you find here (sl. 47 - 75) attempts to give a condensed account of the story MSDRT has to tell about fictional names and fictional characters. More about them can be found in the paper *Sharing real and fictional reference*, which is on the website.

Missing from that paper, the slides and from the chapter on Model Theory of 'Introduction to MSDRT' is a model theory for sentences with empty names. We think we know how to provide it. But it needs to be spelled out and we haven't yet. Perhaps you will be able to guess yourselves from what there is in Ch. 4 at this point how things should go.

Last Week and This Week

• The main topic of Lecture 3:

How to interpret attitude reports with proper names in complement clauses, and, as part of that: What do such attributions really mean?

- The central points of the proposal were:
 - (i) The producer S of such a report must have a representation of its content which includes ERs for the referents of the names she is using.

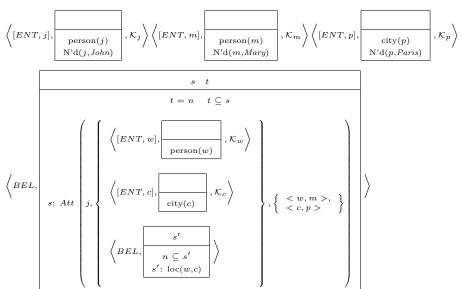
These ERs must be linked to her own Entity Representations for those referents.

(This is the role of the 4th argument of Att.)

- ▶ (ii) The interpreter H must also represent the content of the attribution as involving links to his ERs for the names the speaker has used.
- Here once more is the representation that S must have in order that she can utter legitimately and sincerely:

John believes that Mary is in Paris

Last Week and This Week



Last Week and This Week

• The first part of today:

An attitude report with an empty name in its complement clause:

Le Verrier assumed that Vulcan is/was closer to the sun than Mercury

 After that we turn (too briefly) to the uses and referents of fictional names.

- So far, our treatment of utterances involving names assumed that those names were names of real people and things.
- In that treatment the focus has been on the constraints that the use of such names imposes on producer and interpreter.
 - And when names occur in the complements of attitude reports, further constraints connect producer and interpreter to attributee.
- It is also possible to use empty names in attitude reports.
- In the analytic philosophy of language, reports with empty names have received much attention.
- Prominent among these names has been the name *Vulcan*. *Vulcan* was introduced as the name of a planet; but as it turned
 - Vulcan was introduced as the name of a planet; but as it turns out, the planet it was meant to name didn't exist.

• I expect that most of you are familiar with the case of *Vulcan*, as Kripke presented it in *Naming and Necessity*, and as others who have taken up the case after him have assumed as well:

The 19th century French astronomer Le Verrier hypothesized that hitherto unexplained deviations in the motions of the planet Mercury from the predictions made by the Newtonian model of our Solar System were due to the presence of another planet nearby, which thus far had not yet been sighted.

• Le Verrier called this planet 'Vulcan'.

- From a Kripkean perspective what Le Verrier did when he introduced the name *Vulcan* came to this:
- He gave what he took to be necessary and sufficient conditions to single out the planet whose existence he assumed and stipulated that this planet go by the name of 'Vulcan'.
- After this introduction of the name it was possible for it to spread through the community, in the manner proper names can do this.

Introducing Names as Parts of Definitions

- Note in passing: Le Verrier's introduction of *Vulcan* is an instance of how names can be introduced as part of definitions.
 - Every definition needs a name for what it defines.
- Other examples of this, where the introduction of the name was successful:
 - ▶ Le Verrier's own definition of *Neptune* as the planet responsible for deviations in the motions of Uranus.
 - ▶ Definitions of *Euler's Constant* as the base of the natural algorithm (Euler's definition, our name).
 - (This is just one of countless definitions of single entities in mathematics.)
- (Also think of Kaplan's 'Newman 1' in this connection.)

- An empty name like *Vulcan* can spread through the speech community in much the same way that non-empty names can.
- In particular, transfer from a speaker S to a recipient H will work just the same when they both believe that the name does properly refer.
- I assume that for some period of time after Le Verrier introduced the name *Vulcan* there were many who shared his belief that *Vulcan* did refer to a real planet.

- In the following discussion we will look at two attitude attributing sentences in which *Vulcan* occurs, focusing for the most part on the first.
 - (1) a. Le Verrier assumed that Vulcan is closer to the sun than Mercury.
 - Le Verrier assumed that Vulcan is farther from the sun than Mercury.
- For those familiar with the history of the case (1.a) has the ring of truth, as opposed to (1.b), which seems false.

The reason is intuitively clear:

It was part of Le Verrier's calculations that if Vulcan was to explain the deviations observed in the motions of Mercury, then it had to be closer to the sun than Mercury.

- But how can (1.a) be true?
 - (The complement clause of *believe* contains the empty name *Vulcan*. So its content cannot be the proposition that it would seem to be about, viz. the proposition about some particular thing that it is closer to the sun than Mercury is.)
- To get a better grip on this question it will help to distinguish between two different settings in which (1.a) and (1.b) can be used:
 - (i) a setting in which both the speaker S and her interpreter H believe in the existence of Vulcan;
 - (ii) a setting in which S and H do not believe that Vulcan exists;

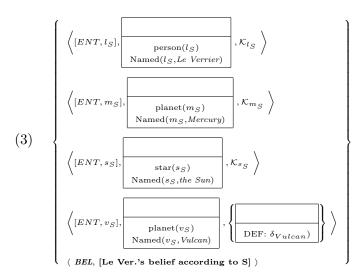
- Our central concern will be this puzzling fact: that it seems possible nevertheless to utter (1.a) as a true statement.
- Note in this connection that when an empty name occurs in a statement that is not an attitude attribution, the statement typically won't be acceptable. For instance, take (2).
 - (2) Vulcan is closer to the sun than Mercury.

For someone who knows that *Vulcan* is an empty name this statement can't pass as true (or even as false).

 We first consider the setting in which S and H share Le Verrier's assumption that there exists a planet with the properties he ascribed to Vulcan.

And let us assume – counterfactually, but for the sake of argument – that the belief about Vulcan's existence that S and H both shared with Le Verrier at the time when S uttered (1.a) was actually true.

- On this assumption the treatment of (1.a) should be just like our earlier treatment of 'John believes that Mary is in Paris':
- For S this means that:
 - (i) she must have Entity Representations labeled by *Le Verrier*, *Mercury*, the Sun and Vulcan for Le Verrier, the planet Mercury, the sun and what she believes to be the planet identified and named by Le Verrier and
 - (ii) she herself must have the belief that at some time in the past Le Verrier held the belief she attributes to him.



The belief constituent from the MSD on the last slide:

$$t = s'$$

$$t = n \quad t \subseteq s'$$

$$\begin{cases} \left\langle [ENT, m_L], \begin{bmatrix} \operatorname{planet}(m_L) \\ \operatorname{Named}(m_L, \operatorname{Mercure}) \end{bmatrix}, \mathcal{K}_{m,L} \right\rangle \\ \left\langle [ENT, s_L], \begin{bmatrix} \sup(s_L) \\ \operatorname{Named}(s_L, \operatorname{le Soleil}) \end{bmatrix}, \mathcal{K}_{s,L} \right\rangle \\ \left\langle [ENT, v_L], \begin{bmatrix} \operatorname{planet}(v_L) \\ \operatorname{N'd}(v_L, \operatorname{V'n}) \end{bmatrix}, \left\{ \begin{bmatrix} \bigcup_{D \in F: \delta_{V'n}} \\ D \in F: \delta_{V'n} \end{bmatrix} \right\} \right\rangle \\ \left\langle B \in L, \begin{bmatrix} s_1 \\ s_1: \operatorname{Closer-to'}(v_L, s_L, m_L) \end{bmatrix} \right\rangle \end{cases}$$

- Three comments on the representation on these two slides:
 - 1. I have assumed that S's anchor for her ER for Vulcan is the definition that Le Verrier used to introduce the name *Vulcan*.

This is a third type of anchor, distinct from both perceptual and vicarious anchors.

2. The verb *assume* has been treated as a doxastic verb, with the same lexical semantics that we adopted earlier for *believe*.

(We ignore the finer semantic distinctions between assume and believe.)

- 3. According to the representation on the last slide, S assumes that Le Verrier has for Mercury, the sun and Vulcan ERs that are labeled by their names in French.
- The constraints we stated when dealing with 'John believes that Mary is in Paris' do not require that Le Verrier's ERs are labeled.
 - But in this example it seems very plausible for S to assume this. (More on this point later.)

- As before, H's interpretation of S's is also subject to such constraints.
- If H also believes that Vulcan exists and accepts S's attribution to Le Verrier as true, then his interpretation of S's utterance must lead him to a new mental state whose relevant part is like the one shown for S.

(But with one further addition: H must have entered vicarious anchors to the *Vulcan*-, the Sun- and Mercury-labeled ERs as witnesses to his interpretations of S's uses of Mercury, the Sun and Vulcan into the Anchor Sets of his ERs labeled with these names.)

- What are we to make of this treatment of S's utterance and H's interpretation of it?
- S and H have done everything they should according to MSDRT's rules for the use and interpretation of attributions with names.
- But clearly something isn't right with the representation that S is required to have according to those rules, nor with the one they tell H to construct:

There is no Vulcan, so the *Vulcan*-labeled ERs of S and H aren't what S and H take them to be.

The Anchor Sets of those ERs are corrupted and do not link them to a proper referent.

• One consequence of this is that the belief which S attributes to Le Verrier is 'undefined':

This belief is supposed to be a belief about an entity that goes by the name 'Vulcan' and that S represents by her own *Vulcan*-labeled ER.

(Note the link between the distinguished dref of Le Verrier's *Vulcan*-labeled ER and the distinguished dref of S's own *Vulcan*-labeled ER in the Link Set of the *Att*-predication in her representation of Le Verrier's belief.)

- But there is no such entity; so there cannot be any belief about it.
- In other words, the specification of the content of Le Verrier's belief that is part of S's own belief about Le Verrier has no well-defined truth conditions.

We repeat this last point on the next slide:

- S's specification of the belief that she attributes to Le Verrier has no well-defined truth conditions.
- So the content specification of S's own belief that Le Verrier has the belief she attributes to him contains an ill-defined content.
- Likewise there is no definite truth-conditional content to the sentence S utters to express her belief that Le Verrier has such a belief.
- Nor is there any well-defined truth-conditional content to H's interpretation of that utterance.
- And yet there is something that is right about S's attribution to Le Verrier and to H's interpretation of it, something that wouldn't have been right if S had uttered instead the sentence (1.b).
 - ('Le Verrier assumed that Vulcan was farther from the sun than Mercury'.)

- But how can we cleanly separate what is right about S's attribution from what is wrong about it?
- To get clearer about an answer to this question, we now consider a speaker S of (1.a) and a listener H living today, who both know that Le Verrier was wrong in his assumption that there is such a planet as Vulcan.
- Again we assume that S has labeled ERs for Le Verrier, Mercury and the sun, as in our previous setting.
- But S doesn't have such a *Vulcan*-labeled ER, for she knows that there is no Vulcan.
- Of course, speakers must have representations of some kind for empty names too. Otherwise they wouldn't be able to use those names.
- But what could those representations be like?

ERs and Pseudo-ERs

- The answer to this question proposed by MSDRT:
 When an agent believes of a name N that it doesn't properly refer, she will have a pseudo-ER for it.
- A pseudo-ER is a representation of the form $\langle [ENT, \alpha], K, \mathcal{K}, -real \rangle$, where:
 - ▶ $\langle [ENT, \alpha], K, \mathcal{K} \rangle$ has the form of an N-labeled Entity Representation. (So K includes the Condition 'Named(α, N)'.)
 - ▶ The final constituent '-real' is a feature indicating that the agent does NOT take the name to be referring.

ERs and Pseudo-ERs

- Formally, it is the feature '-real' that distinguishes pseudo-ERs from ERs.
- We can make this more explicit by adding the feature '+real' to ERs, which the agent does take to properly represent.
- That is, we now adopt the 4-tuples $\langle [ENT, \alpha], K, \mathcal{K}, +real \rangle$ and $\langle [ENT, \alpha], K, \mathcal{K}, -real \rangle$ as the official notation for ERs and pseudo-ERs.
 - But we continue to employ the 3-place notation $\langle [ENT, \alpha], K, \mathcal{K} \rangle$ that we have used so far as a convenient shorthand for the first of these.
- In certain applications it will be useful to distinguish a third type of Entity Representation in addition to ERs and pseudo-ERs.
 - This third type indicates that the agent is undecided whether her ER does properly represent or doesn't.
 - The feature that distinguishes this type from the other two is '?real'.
- (Who has a good name for ERs with the feature '?real'? Any ideas?)

ERs and Pseudo-ERs

- A setting in which '?real'-featured ERs naturally arise is when scholars debate whether a name like *Jonas*, *Gilgamesh* or *King Arthur* was the name of a real person or 'merely' a mythical character.
- Scholars participating in such debates can, at any one time, be divided into three categories:
 - (i) those who believe that the name N is the name of a historical figure,
 - (ii) those who believe that it names a 'merely mythical' figure; and
 - (iii) those who have no fixed opinion either way.
- In the course of such debates scholars will often change their view, changing the 'reality feature' of their ER, for instance from 'real to either +real or -real.
 - (I take this to be yet another way in which ERs can change without losing their identity.)

• With these distinctions under our belt we return to the utterance of attribution (1.a) to Le Verrier by our speaker S of today.

N.B. in the present setting the utterance sounds more natural with the irrealis form was than the indicative form is.) So the sentence we now consider is:

'Le Verrier assumed that Vulcan was closer to the sun than Mercury.'
The difference between *is* and *was* does not affect what matters in our discussion.

- The belief that S must have in order that her utterance be legitimate and sincere is almost like the one we showed earlier for the speaker who shared Le Verrier's his belief in the existence of Vulcan.
- But there are two differences. First, the entity representation which S associates with *Vulcan* is now a pseudo-ER:

$$\left\langle [ENT, v_S], \begin{array}{|c|c|c|c|}\hline & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ \hline & DEF: \delta_{Vulcan}) \end{array} \right\}, -real \ \right\rangle$$

- Second, the connection that S assumes to exist between her pseudo-ER and the ER for Vulcan she attributes to Le Verrier cannot be a link $\langle v_L, v_S \rangle$ like the ones seen in Link Sets of Att-predications so far.
- Those links entail coreference between the agent's own entity representation and the one she attributes to the attributee; but the present link cannot be one of coreference, since S doesn't take her pseudo-ER to refer.
- So we need a different kind of 'link' for the connection between S's own *Vulcan*-labeled pseudo-ER and the ER she attributes to Le Verrier.
- We call these links pseudo-links and we represent them as pairs of the form ' $<\alpha', \stackrel{\wedge}{\alpha}>$ ', where α is the distinguished dref of agent's own ER and α' the distinguished dref of the ER she attributes to the attributee.

(In the case before us the pseudo-link is thus $<\!\!\stackrel{\wedge}{v_L},\stackrel{\wedge}{v_S}\!\!>$.)

- But what exactly is the relation between Entity Representations that pairs ' $\langle \alpha', \stackrel{\wedge}{\alpha} \rangle$ ' stand for?
 - What does an agent commit herself to by adding a pseudo-link to the Link Set of an *Att*-predication that she uses to represent an attitude attribution?
- For an answer to this question we must turn to a topic that has been overdue for some time: that of *causal networks* and *causal chains*.
- Note that a vicarious anchor does two things:
 - ▶ It establishes or confirms coreference.
 - ▶ It establishes a connection between its own ER and a corresponding ER of the agent it mentions.

• More in detail:

When an Interpreter H uses an ER to interpret a reference to some entity made by a speaker S, who uses a referring expression γ , then he enters a vicarious anchor into the Anchor Set of his ER.

This vicarious anchor (i) determines or confirms that the ER represents the entity that S has referred to, and

- (ii) makes his ER and the ER used by S in her act of reference *co*-referring (or confirms their coreference).
- But S's ER may have vicarious anchors in its Anchor Set, witnessing references by yet other speakers and thereby making her ER corefer with the ERs used by those speakers

 (or confirming coreference between her ER and the ones of those

speakers).

- The combinations of H's vicarious anchor and those anchors establish an indirect coreference link between H's ER and the ERs of those speakers.
- In this way networks emerge that consist of coreferring ERs in the mental states of different members of the speech community.
- These networks grow with time and each has
 - ▶ a synchronic dimension, which only concerns possessors of ERs that currently exist, and
 - a diachronic dimension, which includes possessors at different, even distant times.
- Often the ERs that are part of a network are N-labeled for some name N, and they are part of the network in virtue only of vicarious anchors that were responses to uses of N.

- But MSDRT does not restrict vicarious anchoring to interpretation of names.
- Acts of reference through the use of other types of referring phrases can also give rise to vicarious anchors introduced by their interpreters.

 In this way unlabeled ERs can become nodes of coreference networks as well.
- Because of their diachronic properties, and also for other reasons, there
 is much structure to ER networks, most of which still needs to be
 explored.
- Some substructures of ER networks are linearly ordered by the relation of direct or indirect connectedness, and thus are *chains*.
 - The causal chains that connect the user of a name N to someone who was a direct witness of the name's original introduction are among these.

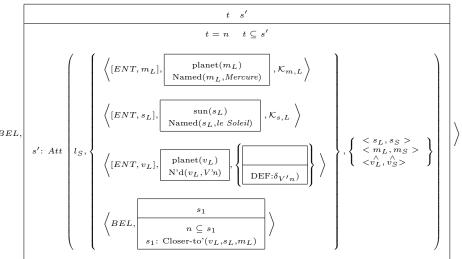
But in general, networks of N-labeled ERs are not linear. And almost always users of N are connected to some witness of the introduction of N by a multitude of chains (Devitt (1972) and later work).

- The intersubjective, network-forming effect of vicarious anchors can be seen as a side effect of their primary task to fix or confirm reference.
- But with pseudo-anchors this is not so.
 For them there is no reference to be fixed or confirmed.
- All a pseudo-anchor can do is to confirm sameness of use.
- More in detail: when H thinks that the name N that S has used is an empty name, he can add a pseudo-anchor to the N-labeled pseudo-ER he will use to interpret S's use of N, as testimony of his commitment to use N in an intersubjectively similar way as S.
- But that is all there can be to his pseudo-anchor. The intersubjective link it establishes is not a side effect, but its very purpose.

- To summarize:
- (i) Vicarious anchors fix or confirm reference
 (a relation between the agent and the world.)

 They also establish coreference networks, as a kind of secondary effect.
 (The links of these networks are intersubjective relations between agents and other members of their speech community.)
- (ii) Pseudo-anchors only relate uses of expressions to the uses that other speakers make of them.
- They serve the unique purpose of creating such intersubjective connections.
- The next slide shows the representation that today's speaker S must have if she is to be justified in uttering her attitude about Le Verrier.

$$\left\langle [\mathit{ENT}, v_S], \left[\begin{array}{c} \mathsf{planet}(v_S) \\ \mathsf{Named}(v_S, \mathit{Vulcan}) \end{array} \right], \left\{ \left[\begin{array}{c} \mathsf{DEF:} \; \delta_{\mathit{Vulcan}}) \end{array} \right] \right\}, -\mathit{real} \; \right\rangle$$



- So far we have encountered pseudo-anchors only in response to the use of an empty name (viz. *Vulcan*).
 - Can pseudo-anchors also be used in response to other expressions that are used as if they were referring but don't?
- I do not want to exclude this possibility categorically, but see no clear benefit from assuming it.
- So for the remainder I will assume that pseudo-anchors only arise through the interpretation of names.

- Within the restricted domain of the interpretations of uses of names, vicarious anchors and pseudo-anchors are in a kind of competition:
- The interpreter H of a name N will either take it to properly refer and add a vicarious anchor to the ER he has or forms for the referent of N;
 or he will take S's use of N not to refer properly and add a pseudo-anchor to his N-labeled pseudo-ER.
- In either case, the ER or pseudo-ER to which the vicarious anchor or pseudo-anchor is added will make some change to the network of N-labeled ERs and pseudo-ERs:
 - It will establish a new connection with an ER or pseudo-ER of another agent or it will reinforce an existing connection.

Back to Attributions with Empty Names

- ullet Note well: whether an N-labeled ER or pseudo-ER belongs to the network is independent of whether the uses of N that provoke the adding of anchors or pseudo-anchors did or didn't refer.
- Interpreters can be wrong either way, taking non-referring uses of N to be referring or taking referring uses to be uses of an empty name.
- Intersubjective networks have to do with what members of the speech community *think* others are doing, not with what those others are doing in fact.
- When the uses of a name N are consistently taken as referring (and referring to its original bearer), then there won't be any pseudo-ERs among the nodes of its network.
- This situation is common enough, but it is not the only one.

Back to Attributions with Empty Names

- Take for instance the case of Mummy and Johnny talking about Santa.
- Mummy knows that Santa doesn't exist, Johnny believes that he does.
 He has an ER for Santa, she only has a Santa-labeled pseudo-ER.
 But she also knows that he has a Santa-labeled ER.
- So each time Johnny uses *Santa* when they talk, she will add a pseudo-anchor to her pseudo-ER that reinforces the intersubjective link between it and Johnny's ER.
- And Johnny for his part will add a vicarious anchor to his ER when Mummy uses *Santa* in his presence, thinking wrongly that she has a *Santa*-labeled ER too.
- But the question who of them is right and who is wrong isn't all that important for how they manage to communicate.

Back to Attributions with Empty Names

- We are now in a position to say what pseudo-links $\langle v_L^{\wedge}, v_S^{\wedge} \rangle$ stand for:
- By adding $\langle \hat{v_L}, \hat{v_S} \rangle$ to her representation of the mental state attribution she makes to Le Verrier, S expresses that her *Vulcan*-labeled pseudo-ER and Le Verrier's *Vulcan*-labeled Entity Representation are part of the same network.
- And let me emphasize: This is a radical step!
 - It brings the intersubjective dimension of meaning directly into the content of an attitude attribution.
- This is so for the attribution that S must make to Le Verrier in thought.
 - But it is so also for the truth conditions that MSDRT assigns to the attitude report she makes by uttering (2)
 - ('Le Verrier assumed that Vulcan was closer to the sun than Mercury.')

And by the same token: It equally applies to the interpretation that her interpreter H should construct as semantic representation of her utterance.

- After all this the question we started out with is still unresolved:

 What is right about the utterances we have looked at of

 'Le Verrier assumed that Vulcan was closer to the sun than Mercury'

 and that would not have been right had our speakers said instead that

 Le Verrier assumed Vulcan was farther from the sun than Mercury?
- To repeat, the answer to this question cannot be that the belief which S attributes to Le Verrier has the same propositional content as a belief he had in fact; for there is no such propositional content.

 However, Le Verrier's belief and the one that S attributes to him share something like a'quasi-propositional content' – the one that Le Verrier wrongly thinks is the content of his belief.

This content can be defined in terms of Le Verrier's doxastically possible worlds:

• On this set of possible worlds the content of Le Verrier's belief that Vulcan is closer to the sun than Mercury and S's specification of that belief are *necessarily equivalent*, in the sense that in any such world w the one is true if and only if the other is.

- Note well, the doxastically possible worlds for Le Verrier are not among the worlds that are genuine alternatives to the actual world.
- For one thing, the 'worlds doxastically possible for Le Verrier' are all possible worlds in which there is a planet with the properties that Le Verrier attributed to it.
 - For all we know such worlds are physically impossible (impossible according to true physical theory).
- This is an instance of a general and deep problem about the difference between physically possible worlds and epistemically or doxastically possible worlds.
- That isn't something I can go into here and now. But the present discussion shows in its own way how difficult a problem it is.

- This then is the answer MSDRT proposes to the question what today's speaker S is doing (and intends to be doing) when she utters the report 'Le Verrier assumed that Vulcan was closer to the sun than Mercury':
 - S ascribes to the attributee Le Verrier a belief that is truth-conditionally equivalent to her specification of it in the terms that he would understand and consider right:
 - There is truth-conditional equivalence throughout the set of what he takes to be the (genuinely) possible worlds.
- This is not quite what is going on when this report is uttered by someone who shares Le Verrier's belief that Vulcan is an existing planet.
- This speaker intends to make a belief attribution to Le Verrier in the same sense that we earlier treated the utterance of 'John believes that Mary is in Paris.'

- We have seen why she cannot succeed with this.
 - But we can nevertheless take her to be doing something else instead, in spite of herself:
 - Displaying in her specification of the belief she attributes to Le Verrier the content of that belief in the way in which he himself would or could have represented that belief.
- As far as that is concerned, she is right, in the same way that today's speaker is right.
- What she is wrong about are the possible worlds, just as Le Verrier is.

This is all I have to say about Vulcan.

Two Comparisons

- MSDRT's proposals for the treatment of attitude attributions with names have much in common with the work of Recanati (Recanati (2016), Recanati (2014)) and that of Sainsbury (Sainsbury (2018)).
- This is so both for attributions involving properly referring names and empty names like Vulcan.
- But I also see a potential difference, at least with Sainsbury's *Thinking* about Things. There are two ways in which an attributor can represent the attribution
 - she makes to an attributee.
- The first is an attribution in thought one that according to MSDRT she needs to have to be in a position to make a corresponding attitude report in words.

Two Comparisons

• The second is the attitude report that her attribution in thought enables her to make (legitimately and sincerely).

In order that this report can be evaluated as true or false it must be possible to see it too as *displaying* the attitude or attitudes it attributes.

But how is the display by the words related to the display in thought?

And how is it related to the general interpretation rules of the language?

Sainsbury's *Thinking about Things* doesn't provide many details.

So I am uncertain whether he could see the treatment offered here of 'Le Verrier assumed that Vulcan was closer to the sun than Mercury.' as an acceptable implementation of his more general ideas.

- But the distinction between displaying someone else's thought in mind or in language has to be addressed somewhere.
- This concludes what I have to say about Vulcan in these lectures.

- This part will be a good deal shorter than originally planned.
- Here are the main issues I will touch on:
- 1. We need more complex descriptions than the MSDs we have been using so far.
 - These MSDs must allow for separate compartments where we store our knowledge of pieces of fiction (stories and myths).
- 2. These compartments, however, are not fully isolated, either from other parts in the agent's mental state, or from the rest of the community.

• 3. We want to distinguish between (a) *protagonists* of pieces of fiction and (b) *fictional characters*.

As I use these terms, the former are inhabitants of their stories, while the latter are inhabitants of the real world.

For instance, Frodo, the main protagonist of *The Lord of the Rings*, is a hobbit.

But the name Frodo can also be used as name of a corresponding fictional character.

And that is not a hobbit, but a certain kind of abstract object, the nature of which will be explained later.

- 4. We want to make the following distinction between utterances belonging to *fiction* and utterances belonging to *meta-fiction*.
 - Consider the *The Lord of the Rings* (the one piece of fiction we will be looking at).
- When I say something that I take to be part of the story, my utterance is *fictional*; it is about the world of this particular piece of fiction.
- When I make a comment about *The Lord of the Rings*, e.g. stating my own reaction to it or to a comment made by someone else, then my utterance is a *meta-fictional* one.
 - (It belongs to the meta-fiction of The Lord of the Rings.)
- But note that meta-fictional statements need not belong to a single piece of fiction.
 - For instance, I can engage in a comparison of Emma Bovary and Anna Karenina, or between Siegfrid and Sir Lancelot (much as I can engage in a comparison of Francesca da Rimini and Maria d'Avalos).

- Fictional statements are subject to a 3-valued truth regime:
 - A statement is either (i) entailed by the piece of fiction or (ii) its negation is entailed by it or (iii) neither.
- Factual statements belonging to meta-fiction are subject to a 2-valued truth regime.
 - (Evaluative statements are another matter. Whether these can have truth values is another matter, which I am not addressing, whether they are meta-fictional or not.)
- Factual metafictional statements have 2-valued truth conditions because they assert facts about things in the real world.
- They are about things in the real world because they are about fictional characters, and fictional characters are entities of the real world.
- But what are fictional characters precisely? I will come to that presently.

- Determining the nature of fictional characters is the first step towards defining truth conditions for factual statements of meta-fiction, but only a first step.
- Once the questin has been addressed as well, there is a third one: Not uncommonly, the statements people make on the topic of some piece of fiction are mixtures of fictional and meta-fictional statements.

Here is an example:

At that point Gollum bites off Frodo's finger. It is towards the end of the book. I remember I was shocked and relieved at the same time when I first read this passage.

- The problem with such utterances is that different parts of them obey different truth regimes.
- How is an account of the truth conditions of those sentences and discourses supposed to deal with this?

- We start with the extension of MSDs so that they can describe mental states with fiction compartments.
- As a first step, we now adopt a distinction between beliefs and unquestioned background assumptions.
- On the one hand there are an agent's beliefs. These are now treated as all of them challengeable, potential targets of criticism and defense.
- On the other hand there are the assumptions that the agent treats as indubitable.
- But note well that this division between what the agent takes for granted and what the subject of justified but challengeable belief is one that need not be carved in stone.
 - When forced or invited, an agent may reclassify what she had been treating as immune to doubt so far as open to questioning after all and possibly in need of defense.

- Second, each piece of fiction F that is known to an agent will have its own compartment in her mental state.
- And each fiction compartment takes for granted the agent's unquestioned background assumptions, so long as the fiction doesn't overrule those assumptions (e.g. by assuming that there are hobbits).
- At this point I make a sweeping assumption, which is only partly supported by the current state of the art in formal semantics:
- ullet An agent A's knowledge of F takes the form of a semantic representation that is much like the MSDs considered so far.
- It consists of a set of ERs for the protagonists of F, together with a content specification of the form $\langle CONT_F, K_F \rangle$, where K_F is a content specification in some suitable DRS-language L_F , and $CONT_F$ is a Mode Indicator meaning 'is part of the content of F'.
 - As with other MSDs, the distinguished drefs of the ERs for the protagonists of F can occur as arguments of predications in K_F .

- \bullet The ERs for the protagonists of F are pseudo-ERs of a special kind.
 - They are not anchored in the way of ERs for what the agent A takes to be real entities obviously, since the agent takes them to stand for things fictional.
- Their anchors are pseudo-anchors, which link them either (i) to tokens of a name (or other type of referential expression) occurring in a text (an authoritative account of the myth F or the fictional text that created F, in the manner that e.g. Tolkien's the Lord of the Rings created the piece of fiction on which we focus), or
 - (ii) to the ER of some other agent A' from whom A gets the piece of fiction F.
 - (Typically this will take the form of A' telling A the story and mentioning the protagonists in the course of it, usually by name.)
- I assume that each time a reference is made to a protagonist in the oral or written narrative to which A is exposed, A adds such a pseudo-anchor to her pseudo-ER for that protagonist.

- These assumptions have been taken from (Kamp (2021)), from which also most of the remainder of these slides has been drawn.
- What I have mentioned so far owes much to Emar Maier's essay (Maier (2017)), which was a crucial inspiration to (Kamp (2021)).
- The formalism which Maier uses to describe the fiction-related parts of mental states, his *Attitude description Theory* (*ADT*), is closely related to the DRS languages of MSDRT.
- But most of what follows from this point onwards is different from what can be found in (Maier (2017)).
- Maier's approach is inspired by Walton's thesis that the function of fictional texts and other works of art is to stimulate and guide the perceiver's imagination (Walton (1990)).

- Maier's approach is inspired by Walton's thesis that the function of fictional texts and certain other works of art is to stimulate and guide the perceiver's imagination of the world of the fiction. (Walton (1990)).
- It is in this spirit also that I have taken over the spirit of his proposal.
- However, in the case of fictional texts and oral narratives there is also a soberer part to the story of imaginatively recreating the fictional world.
- Interpreters apply the rules of the natural language in which the fiction is presented to them in their construction of a Logical Form of the text.
- And the way they do that is not really different from what they do when they interpret what they take to be talk or texts about the real world.
 - In either case there is a quite clear sense in which their interpretation gets the written or spoken narrative right or wrong.

- In the light of this I will assume that there is for written and spoken fictional texts an *authoritative Logical Form*:
 - A semantic representation that gets the text right and that therefore can be used as basis for the 3-valued evaluation of factual 'in-the-story' statements.
- I call this authoritative Logical Form for the fiction F 'StLF(F)'.
- An agent A who has a fiction compartment for F can make a false or unjustified in-the-story claim for two reasons
 - \blacktriangleright because it contradicts, or does not follow from, the Logical Form that A herself has constructed from the presentation or presentations of F to which she has been exposed, or
 - because that Logical Form is inaccurate to begin with (or both).

- Two marginal remarks before we return to our initial questions about fictional names and fictional characters:
- One of the motivations for developing DRT in the late seventies and early eighties was the conviction that the rules that govern interpretation in a human language L are the same for fiction and talk about the real world.
 - The difference is with what the interpreter does with the results of applying those rules to the spoken or written input.
- I leave open whether the acts of the imagination that Walton speaks of belong to what happens at this second stage, and also whether the exercise of the imagination that he has in mind really is distinctive of interpreting fiction, as opposed to what we take to be about the real world.
- In the remaining slides these questions can be set aside, since all we need are the representations that agents construct by applying the interpretation rules of L.

- We now turn to the question: What is a fictional character?
- As a prelude to MSDRT's answer consider the case of a named individual who lived a long way back in the past.
- To focus, let us take Thales, the 7th-6th century B.C. Greek philosopher Thales, said to have been from the city of Miletus in Asia Minor.
- Many of us have a Thales-labeled ER for Thales, and most of these ERs have substantial Anchor Sets, since Thales is likely to cross our intellectual paths again and again.
- But without doubt all the anchors in those Anchor Sets will be vicarious; that is all that one can hope for with someone dead for so long and without identifiable writings or tomb.
- On the other hand, it is quite likely that pretty much all those anchors correctly connect our *Thales*-labeled ERs with the real Thales.

ullet Once an agent A has an Entity Representation for Thales, she can learn further things about him.

And in fact, she can make an effort to find out more.

- But what is there to be found out about Thales today?
 What information about him could still be detected?
- Claim: that information is limited to two sources, both of which have to do with the network of ERs that represent Thales.

- The two sources of information are:
 - (i) Other agents A' who also have ERs that belong to the network and are currently alive.
 - (ii) Texts that refer to Thales and that are still around.
- Suppose that it is clear what information can be found in these various sources and that this information can be clearly separated from information in those sources that is false.
- This totality of correct information distributed over the accessible sources forms a true (and thus consistent) theory of Thales.
- That theory is incomplete.

It will lack endless amounts of information about Thales that would be of no interest to most of us today, but also much that we would like to get our hands on.

- Let us refer to this 'theory about Thales' as INF(Thales, t_0), where t_0 is the time of current history.
- INF(Thales, t_0) sets an upper bound to all we can ever hope to learn about Thales.
 - It defines what we might call the attainable truth about Thales.
- Attainable truth is a 3-valued concept, because INF(Thales, t_0) is incomplete.
 - That is, if L is some language in which we can talk about Thales, then the factual sentences of L can be divided into three groups:
 - ▶ those that are entailed by INF(Thales, t_0) (the attainable truths);
 - ▶ those whose negations are entailed by INF(Thales, t_0) (the attainable falsehoods);
 - ▶ those that are neither attainably true nor attainably false.

- Attainable truth is not the same thing as truth.
- Since Thales is a historical figure, truth about Thales is a two-valued matter:
 - Every factual sentence about Thales is either true or false.
- Note in this connection that among the true statements about Thales there are many that seem to have little to do with Thales.
 - For instance, the statement that you mentioned Thales to me only yesterday.
- Every true statement about Thales expresses a property of Thales, including the one above, which seems to have little if anything to do with Thales.
- But even properties of this kind may be important for our over-all image of Thales, including our understanding of his influence on those came later.

- The property that Thales has iff you mentioned him to me yesterday is unlikely to be one of them.
- But the property of having been mentioned by Plato in discussion with Aristotle is another matter.

It would be interesting to know more about that.

- For attainable truth about Thales all that counts is the current collective of people and texts that are part of the network of Entity Representations that represent him.
- To put things less sloppily:
 - (i) For each agent A now alive who has a *Thales*-labeled ER that is linked to Thales there is the information that A associates with that ER, including all her true beliefs about Thales.
 - (ii) For each existing text that mentions Thales we can postulate an abstract *Thales*-labeled ER, with which is associated everything the text says about Thales and that is true.

- The *Thales*-labeled ERs of these agents and texts form a subset $NW(\text{Thales}, t_0)$ of a large diachronic network of current and past ERs that represent Thales.
- And this set $NW(\text{Thales}, t_0)$ determines all the true information about Thales that could still be found anywhere today.
 - That is, INF(Thales, t_0) is determined by NW(Thales, t_0).
- This connection holds for arbitrary entities **d** and times t: INF(**d**,t) is determined by $NW(\mathbf{d}, t)$.
- That is, we can think of INF as a function from current network subsets of **d**-representing ERs to attainable truths about **d**.
- And we can write $INF(\mathbf{d}, t)$ as 'INF($NW(\mathbf{d}, t)$)'.

- This shows the formal possibility of identifying **d** for us at t_0 (today) with the network $NW(\mathbf{d}, t_0)$:
 - $NW(\mathbf{d}, t_0)$ is what remains for us today of the historical 'figure' \mathbf{d} ; and it harbors all the truths about \mathbf{d} that can still be recovered today:
 - $\phi(\mathbf{d})$ is attainably true at t_0 iff $\phi(\mathbf{d})$ is entailed by INF(NW(\mathbf{d}, t)
 - and likewise for attainably false.
- Along these lines we can rewrite the attainable truth semantics for entities from the distant past as a partial 2-valued semantics of statements about $NW(\mathbf{d}, t_0)$.
 - Rewriting the semantics of attainable truth about Thales in this way would be one such case.

• All this may seem a little perverse.

If Thales was a living person once, then the factual statements about him are either true or false.

and the true factual statements form a complete theory.

We do not need an intersubjective surrogate for the real Thales and the attainable truth theory as a theory about him.

- But the case of real entities from the past is different from that of the protagonists from fictions.
- It is to those that we now return.

• So far we have assumed that the representations of pieces of fiction that are constructed by their recipients have Entity Representations for the protagonists of those fictions.

But these belong to the special compartments set aside for those pieces of fiction.

- Can they also be employed in the representation of meta-talk like:
 - (4) Fred mentioned Frodo to me last night. He is quite obsessed with *The Lord of the Rings*.

Answer: Yes and No.

- No, because what a sentence like (4) is about is something belonging to the real world, to which Fred and I also belong.
 - In order for me to make a legitimate use of (4) I ought to have a *Frodo*-labeled ER for this something,
 - A pseudo-ER for some figure from some fiction, which is 'locked in' within the special compartment for the fiction to which it belongs, won't do for this.
- Yes, since (4) is about the Frodo of Tolkien's story.
 - It ought to be possible to recast my representation for this protagonist so that it can serve as basis for utterances like (4) too.

- MSDRT's solution to this quandary is a kind of *Divide et Impera*.
- It involves two stipulations:
- The first is that the pseudo-ERs for fiction protagonists can be *exported* from their fiction compartments.
- In this process the pseudo-ER is turned into a +real ER for the corresponding *fictional character*.
- Such exportations are always possible.
 - And I assume they always have taken place when the agent uses the name of the protagonist in a meta-fictional utterance.
- But what do the exported Entity Representations represent?

 The answer to this is the second stipulation of my proposal.

- This second stipulation borrows from our reflections on recasting the attainable-truth semantics for historical figures like Thales as a partial 2-valued semantics about entities of the form $NW(\mathbf{d}, t_0)$.
- But what looked there like a merely formal maneuver is in the present context arguably the only sort of option we have:
 - All there is of Frodo in the actual world consists of the collective awareness of those who participated in his tribulations in *The Lord of the Rings* and thought of him and talked about him with others.
 - The fictional character Frodo must be something like this, and cannot be more than that.
- If this is accepted, then the question is how this informal intuition can be made formally explicit.
 - To answer this question we exploit our reflections on the attainable truth semantics for entities from a distant past like Thales.

- My second stipulation, then, is that at the current time t_0 the fictional character Frodo is the entity $NW(Frodo, t_0)$.
 - Or, to put the same thing in slightly different words:
- $NW(Frodo, t_0)$ is the denotation of the name Frodo when it is used at t_0 as the name of a fictional character.
- It may be asked if this is the right proposal for the ontology of fictional characters, or whether there is a sense in which it is the best possible one.
- But, to repeat, the proposal has two indispensable qualities:
 - ▶ The fictional characters it posits are constructs made up entirely out of constituents belonging to the real world.
 - ▶ The proposal treats fictional characters as truly intersubjective, It treats them as shared property of all those who know the pieces of fiction to which they belong or have heard about them in some other way.

- In addition, when the fiction in question is one originating in a single extant text, like *The Lord of the Rings*, then the fictional characters proposed for its protagonists have the following feature:
 - For the case of Frodo: Among the agents who have Frodo-labeled ERs in $NW(Frodo, t_0)$ there will be some at least who have read the book and whose ERs for the character Frodo are exportations of their pseudo-ERs for the protagonist Frodo.
- Via each such agent A $NW(Frodo, t_0)$ is directly linked to A's semantic representation of The Lord of the Rings.
- This also provides an unambiguous link between $NW(Frodo, t_0)$ and the authoritative semantic representation StLF(LotR) of The Lord of the Rings that we assumed to exist. (See Slide 57).
- We can rely on this link in stating the partial truth conditions of factual in-the-story statements about Frodo.

- One possible objection to the proposal to identify fictional characters with networks of ERs representing them is that NW(N, t) varies as a function of t:
 - ERs of new agents and texts get added as time goes on, while other ERs disappear because their agents die or lose their minds in some other way.
- This means that the characters we refer to when we use fictional names as names of fictional characters change all the time, and may do so in the course of our very acts of using those names.
- One could control for some of this by replacing the networks proposed by diachronic networks that go back to the times when the given fiction became part of our culture.
- For our sample case this time is easily determined, as that at which *The Lord of the Rings* appeared.

- This helps somewhat.
 - But it only helps a little, since it doesn't block the growth of fictional characters with time.
- A more head-on reply to the criticism is that for intersubjectively grounded entities, like, it seems to us, fictional characters will have to be, it is to be expected and accepted that their extensions change over time.
- Here too what's remains the same is the intensional functor that determines the network at each time to which it can be applied.
- A revision of the proposal along such lines will require some more working out.
 - And in any case I want to leave the precise definition of fictional characters as the denotations of real world-related uses of fictional names open to further debate.

- We are now ready to deal with the question of fictional and meta-fictional truth conditions.
- The over-all strategy is this:
- The partial 2-valued truth conditions for purely fictional statements are given by a model theory for the language L in which the fiction is presented, together with the authoritative Logical Form StLF(F) for the given fiction F.
 - This will make it possible to determine whether the Logical Form for a given such statement is entailed by StLF(F), contradicts StLF(F) or neither.
- The purely meta-fictional statements are to be evaluated in the classical manner in models that specify the extensions of the binary meta-fictional predicates that occur in these Logical Forms. (A little more about this on the one but next slide.)

The models that can serve both of these types of evaluation must combine the two kinds of information.

• But in addition to the statements about fictional characters that we can make by using the predicates P' there are also those that do not correspond to anything in the piece of fiction.

An example was (4), which I reproduce here:

Fred mentioned Frodo to me last night. He is quite obsessed with The Lord of the Rings.

- Such sentences are built from predicates belonging to the language in which we talk we use when we talk about fiction.
- They are about events and states in the actual world and are subject to the 2-valued truth regime that is assumed in formal semantics as a default:

Fred either did mention Frodo to me last night or he didn't; and so on.

• This settles the question of truth conditions for meta-fictional factual statements at least in principle:

In any model for fictional and meta-fictional utterances the predicates used in meta-fiction will have their extensions in the way in which predicates used to describe real world states and events do this.

Normally this is done by assuming that the interpretation function of the model assigns these predicates 'extensions' – sets containing all and only the tuples satisfying them.

I assume that this is also the way this is done in our models for fictional and meta-fictional talk.

- In addition to this we also need a model theory for the semantic representations in fiction compartments, and, in particular for the authoritative Logical Form for the given piece of fiction.
- This will give us an account of the truth conditions for the mere meta-fictional utterances and for the in-the-story utterances.

 And that brings us back to the problem I mentioned at the outset of this sketch of fictional ontology and truth conditions of statements about fiction:

What do we do with utterances of sentences and sentence sequences that are part fictional and part meta-fictional?

Here once more the example given earlier as an illustration of this:

At that point Gollum bites off Frodo's finger. It is towards the end of the book. I remember I was shocked and relieved at the same time when I first read this passage.

• We are now in a position to tackle this problem too.

- The first thing an interpreter must be able to do when dealing with such mixed sentences or discourses is to disentangle the 3-valued and 2-valued parts of them.
- But given our analysis of the distinction between in-the-story and meta-fictional predicates this disentanglement is now a problem that arises at the level of the predications involving those predicates:
 - The interpreter has be able to distinguish those predicates P that are from the language L of the representation of the piece of fiction from those that are meta-fictional.
- Let us assume that the interpreter H is capable of making these distinctions.
 - (Distinguishing between the predicates of L from the meta-fictional ones is something that speakers seem to have little difficulty with.)

- H can make use of this discriminative capacity in his construction of the Logical Form for the utterance:
 - When a predication involves a predicate P of L, then he must interpret the predication as pertaining to what happens or is the case in the fiction.
 - This entails among other things that when a fictional name occurs as an argument of P, H must treat it as a name for a protagonist.
- When on the other hand the predicate belongs to the meta-fictional part of the language, then H must interpret the predication as a bit of meta-fiction and its arguments cannot be protagonists.
 - In particular, a fictional name occurring as argument of such a predicate must be treated as name of a fictional character.

- ullet The semantic representation that results from this way of interpreting the given sentence or discourse can then be evaluated in models M spoken of above.
 - This will involve using the model theory for the authoritative representation StLF(LotR) for the predications of the first kind and the real world part of the model for the predications of the second kind.
- Since we are dealing with a partial 2-valued truth regime for the former predications and a full 2-valued truth regime for the latter, the semantics for the sentence of discourse over-all will be partial 2-valued.

- This is only a first sketch of how the truth conditions of mixed statements using fictional names may be handled.
- There are still a number of issues that have to be sorted in the full model-theoretic elaboration of this sketch.
- One non-trivial issue are quantificational fictional statements, and another is the exact definition of the fictional characters that are represented by the ERs for those.
- It is also worth noting that the treatment of fictional and meta-fictional sentences I have proposed renders fictional names ambiguous, between names of protagonists and names of characters.

• But this ambiguity is systematic and locally resolved:

When we are engaged in talk about fiction we always use these names as names of characters.

But we use them as names of protagonists when we are immersed in the fiction:

when we read it or listen to it and live with the protagonists that we identify with emotionally and about whose fate we are particularly concerned.

- That is a very different way of engaging with language than when we are involved in first or higher level commentary.
- Perhaps it isn't always fully clear, to ourselves and others, which of these modes we are in when using a fictional name.

But that doesn't matter too much. For the truth-conditional content of what we are saying rarely depends on it.

Winding Up

- With this I am coming to the end of what I wanted to say about fiction.

 And with that to the end of what I have been able to fit within these four lectures.
- And once more: There are quite a few things that I would have liked to say but didn't manage:
- Some of these things can be found on the slides for this and the previous lectures.
- And quite a lot more can be found in *An Introduction to MSDRT* that is also available on the Collège de France website for these lectures, and in the published papers that have been put there.

Wish you luck and lots of fun!

End of All

THANK YOU (four times over)

- Devitt, M. (1972), The semantics of proper names: A causal theory., PhD thesis, Department of Philosophy, Harvard University.
- Kamp, H. (2021), Sharing real and fictional reference, in E. Maier & A. Stokke, eds, 'The Language of Fiction', Oxford University Press.
- Maier, E. (2017), 'Fictional names in psychologistic semantics', *Theoretical Linguistics* **43**, 1–45.
- Recanati, F. (2014), 'Empty thoughts and vicarious thoughts in the mental file framework', Croatian Journal of Philosophy 15, 1–11.
- Recanati, F. (2016), Mental Files in Flux, Oxford.
- Sainsbury, R. (2018), *Thinking about Things*, Oxford University Press, Oxford, United Kingdom.
- Walton, K., ed. (1990), Mimesis as Make-Believe: On the Foundations of the Representational Arts, Harvard University Press, Cambridge, Mass.