

Guide to Chapter Four of Gareth Evans' *The Varieties of Reference*

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4.0 What Happens in Chapter Four

This chapter does two things. Both concern Russell's Principle (RP), which states that in order for a subject to be able to think about an object, the subject must be able to discern that object from all other things. The first is a constraint on what sorts of representational states count as thoughts. It is the Generality Constraint (GC): the core idea is that thoughts are structured, that is, they result from the combination of components or component-abilities that can be recombined. One clear manifestation is that if a subject is able to think that a is F, and is able to think that b is G, then that subject must also have the ability to think a is G, and b is F. Think of this as a test: if the state a subject is in does not satisfy the GC, then it cannot be a thought.

*The second is Evans' take on what is involved in thinking of objects, an account which aims to explain what discriminating knowledge amounts to, and simultaneously to show how the GC is satisfied. The starting point is the fact that for objects of any type G, there are individuation conditions that not only specify in general terms how Gs are distinguished from each other, but also, for any particular G, specify what it is that distinguishes that G from the other Gs. For example, poker hands are distinguished from each other by the cards they consist of; and a royal flush is distinguished from other hands in that it consists in a 10, J, Q, K and A all of the same suit. The same is true of properties. For example shape properties are distinguished by geometrical features; and circularity is distinguished from other shapes by being a closed 2D curve all of whose points are equi-distant from some point. These individuation conditions for kinds of objects and properties Evans calls their **fundamental ground of difference**. Clearly it is possible for one to think of an object or property as the thing that possesses the specific fundamental ground of difference it has. Evans describes such thoughts as employing a **fundamental Idea** of the object or property. For example, I can think of a shape as a closed curve etc. In such a case, one is clearly satisfying RP: since one is thinking of the object in terms of those criteria that individuate it from other objects of its type, one will be distinguishing that object from all others. Moreover, since the ability to know what it would mean for this G to have property F is a special case of knowing what it would be for a G thing in general to be F, the GC is also satisfied.*

Finally, Evans argues that while not all thoughts involve fundamental Ideas in this way, thoughts involving non-fundamental Ideas are underwritten by their connection to thoughts involving fundamental Ideas. And if these points are all correct, then Evans' account of thought explains why RP and GC are both satisfied.

4.1 Its meaning and importance

In this section Evans motivates the need for an interpretation and defense of Russell's Principle. He begins with a fairly minimal interpretation: that it requires discriminating knowledge — in other words, it requires the subject to be able to distinguish the object of thought from all other objects. He then provides two examples involving steel balls, one of which (he presumes) provides intuitive support for RP, and the other of which (he presumes) yields intuitions that run counter to RP. Evans uses these examples to motivate the need for a more thorough understanding of RP, so that its ability to provide theoretically satisfactory analyses of such cases is secured. Evans closes by remarking briefly on why an analysis of thought is important for his ultimate project of understanding reference.

The first hurdle in defending Russell's Principle (RP) is to get clear about its meaning. Anyone can claim to endorse it if it is given a weak enough interpretation: the adherent to the photograph model might claim that the mere *possession* of states causally related to the object suffices for the subject to "know which object" the thought-attempt concerns. Evans proposes to start off with the following rough formulation of RP, which, while still imprecise, is at least substantive enough to get the ball rolling: in order for a subject to think about an object, she must have *discriminating knowledge* of that object, which means she must be able to distinguish that object from all other things. The three ways of doing this that Evans discusses are i) when one can perceive the object, ii) when one can recognize the object, and iii) when one knows uniquely distinguishing features of the object.

Evans then produces two thought experiments. The first concerns a subject *S* who one day sees two identical steel balls suspended by string from a single point and rotating about it. The subject has, let us suppose, no ability (descriptive knowledge or recognitional capacity or current perceptual contact) to distinguish one of the balls from the other. According to Evans, we would not say that the subject could have a thought about just one of the balls.

Now, many people find this pronouncement unconvincing, but I think this is because Evans' point is not always understood. In order to count against RP, the example would have to be one in which *the subject cannot distinguish between them*, and yet can have a thought about just one of them. So any attempt to exploit discriminating knowledge, such as 'the ball that was on the left when I first saw the two balls', while perhaps successful in allowing one to think about just one of the balls, does so in a way that makes the case no longer a counter-example to RP. In such a case, the subject has in fact invoked descriptive resources that are sufficient to discriminate them. Evans' claim is not that one couldn't have a thought about one of the balls. Rather, the claim is that one could not have a thought about one of the balls without invoking some sort of distinguishing features of the sort the defender of RP claims is needed.

The other sort of objection people have takes a bit longer to explain. The objector imagines herself in the position of the subject, and she entertains imagery of the two balls rotating and focuses attention of one of the balls in the image. There are two cases: first, if the imagery is in fact a *memory*, perhaps a memory of when the subject first saw the two balls, then Evans would agree that the subject can think about one of the balls separately. But in this case, that is because the subject has retained

discriminating knowledge through her memory. In this case, it is discriminating knowledge that is derived from the perceptual episode that is being remembered. Everyone is in agreement that one can distinguish objects from all others in perception, and in this case the memory is retaining that discriminating information.

The second possibility is that the imagery is not a memory, but is rather a mental image constructed at the present time as a sort of accompanying graphic to the thought process. But in this case, even though the subject can distinguish the two imagery-balls, there is no reason to think that this is somehow connected to an actual ability to distinguish the two actual balls. Without connecting one of the imagined balls to some sort of actual discriminating feature of the actual balls (e.g. *the ball that was in the left when I they first came into view*), it isn't clear why we should say that the subject is thinking of one of the actual balls rather than the other simply because they are focusing on one of the balls in the image they just conjured up. (Evans will return to spatial imaginings such as this later in the chapter.)

The second thought experiment is a variant on the first. In this case, the subject sees two balls, one (B_1) on one day and the second (B_2) on a later day. Furthermore, the subject, because of focal amnesia, retains no memory of the first encounter with B_1 . Such a subject would be unable to produce any facts which would discriminate between the two, without relying on descriptions like 'the one from which my memories derive' (but as we saw, such reliance immediately remove the case from contention as a counter-example to RP).

Evans claims that even the subject would, upon learning about both balls and his amnesia, no longer claim to be thinking about 'that ball' (which would again be in accord with RP). But, he admits that it would nonetheless be 'natural to say' that the subject was *thinking of* the second ball, or *had the second ball in mind*. And this is in *prima facie* conflict with RP. The PM, according to which the thought is about the object causally responsible for it (so to speak) would say that in fact the subject *is* thinking about the second ball. Given that there is nothing the subject can do to discriminate them, we appear to have a counter-example to RP. Note that the second sentence on page 91 says that we have 'some apparent counter examples'. This seems to be a slip, as only the second is intended as a candidate counter-example. Perhaps Evans is referring to earlier discussions of the PM and Donnellan's views in particular (e.g. p. 81).

Evans then discusses the importance of a theoretical defense of RP. The short version is that a defense of it will hopefully not only clarify what it means, but also shed light on what it is that unites the three sorts of discrimination (perception, description, recognition). And the hope is that when there is a clear understanding of what discriminating knowledge amounts to, we will be able to use that as theoretical leverage to help us understand the ways in which the requirements for, and limitations of, the three sorts of discrimination that are relevant.

At the end, Evans reiterates that the reason for worrying so much about *thought* in a book about *reference* is that, as he will argue, the reference of a type of expression is determined by what counts as understanding utterances using the expression, and understanding consists in an ability to entertain thoughts of the right sort.

4.2 Verificationism and ideal verificationism

In this section Evans introduces one approach to understanding what discriminating knowledge might consist in: verificationism, perhaps supplemented in such a way as to make it ideal verificationism. The basic idea behind verificationism is that meaning is tied to experience-based verification — one application of verificationism was to deride certain kinds of unverifiable claims as meaningless. In the case of singular thought, the idea is that my ability to think of an object is underwritten either by my direct experiential contact with it (e.g. I can think about 'that apple' because I am currently perceiving it); or by my ability to determine of an object I can perceive whether or not it is the relevant object (e.g., I can think about Paul Churchland because I have a recognitional capacity that would allow me to determine, of an object presented in perception, whether or not it is Paul Churchland); or whether I can determine whether an object is one that uniquely fits some description. The model not only provides an account of what discriminating knowledge amounts to, but does so in a way that shows how the three kinds of discriminatory capacities fall out of the theory.

Though Evans will argue (toward the end of this section) that verificationism is inadequate, the form of the verificationist position has some features that Evans will exploit in his own proposal, which will be given in Section 4.4.

Evans gives a brief overview of Dummettian verificationism. A distinction is drawn between two sorts of propositions concerning an object. **First**, there can be propositions about objects where one is in a position to verify whether the object has or lacks the property the proposition attributes to it, prototypically perceptually. **This is the *one-step verification procedure*.** For example, you and I are in the same location, you point to apple and say 'That is red.' I simply assess the applicability of the predicate '... is red' to the object that I am currently perceiving.

The **second** sort of proposition is one for which a ***two-step verification procedure*** is needed. Such propositions will be of the form 'a is F', where 'a' is an expression other than a demonstrative — either a proper name or description. The first step will consist in deciding, for some demonstratively identified object, whether it is in fact a, and then once this has been answered in the affirmative, using the one-step procedure outlined above for assessing the applicability of the predicate to this demonstratively identified object.

The first step of the two-step procedure, whereby the thinker determines of some given object whether it is a, can take one of two forms: the subject might be able to recognize a, or might know (and be able to decide the applicability of) some distinguishing features of a. For example, someone tells me that my mother is ill. I first come into the vicinity of some object, and employing my recognitional capacity I determine that *that object* (that I can currently perceive) is my mother. I then use the one step procedure outlined above to determine whether or not the object I am perceiving is such that the predicate '... is ill' is truly predicated of it. This example involves my use of a recognitional capacity in the first stage. A different sort of example would involve my ability to see if some object uniquely satisfies some description — e.g. 'the tallest person in the room is sunburnt'. I would first determine of some object I can perceive if it is the tallest person in the room, and if so, I then decide, of it whether it is sunburnt. Thus the verificationist not only makes good on what discriminating knowledge amounts to, but does so in a way which is in harmony with the trichotomy (acquaintance, description,

recognition) Evans mentioned earlier. But note that in all cases the one-step procedure is necessarily employed.

From the bottom of page 94 to the bottom of page 95 Evans provides quotes from Dummett, whose views are under consideration, to show how he applies these verificationist themes to his interpretation of Frege.

After this, Evans brings up a number of objections against verificationism. There are two sorts of cases which give the model trouble: i) propositions involving small, large, distant, or otherwise spatial but imperceptible objects (e.g. electrons, the Milky Way Galaxy, black holes); and ii) propositions involving abstract objects. Evans discusses Dummett's attempts to deal with these cases, and claims that these attempts fail.

In the first sort of case Dummett claims that we can extend the demonstrative model to include i) detection with instruments and ii) the idea of demonstrative verification procedures being carried out by beings with very different perceptual and cognitive abilities. Evans' objection to this line of extension is that it effectively undercuts the spirit of the verificationist model (this is the first full paragraph on page 97). Why? Because such extended procedures are no longer able to play the same sort of role that their non-extended counterparts play in deciding the truth value of propositions about the objects so identified. For example, if the thought is 'Quine is bald', then one can demonstratively identify some object, decide that it is Quine via one's recognitional capacities, and then decide of this demonstratively identified object if it is or is not bald. But a thought such as 'This plant's DNA is fragmented', does not proceed by singling out something demonstratively in this extended way, and then deciding whether or not this demonstratively identified object is fragmented. We can imaginatively extend the notion of demonstrative identification to such objects, but when we do we can no longer see it is playing a role in how we actually verify the truth of propositions concerning those objects.

In the case of abstract objects, Dummett's suggestion is that we adopt some preferred signs or names for such objects, and the verification procedure is then run not on the objects, but on the preferred set of names. For example, to decide if $[(5 \times 61) - 33] + (51 \times 23)$ is evenly divisible by 2, we first determine how to express the number via its canonical name, in whatever notation we use, and then decide, of the number represented in this way (1445) whether it is evenly divisible by 2. Or to determine whether Ashely's age in years is a prime number, we first determine what her age is in the canonical notation, say '31', and then determine of the number designated by that name whether or not it is prime.

Evans' objection is that even if this works for numbers, it is not at all clear that it will work for all abstract objects, because there may not in general be anything like a canonical notation for such objects. Numbers appear to be a rather special case in this regard.

[Note for clarification: Near the top of page 99, Evans starts the paragraph with "As for the second of the two points..." He is referring to the sentence bridging pages 95 and 96. The first points were that while verificationism seems to handle some things well, there are others it doesn't handle so well. The second point, which he is turning to now, is that those things which it accounts for well are accounted for better by other models. He is now beginning the turn to his alternative model, but the end of this section is just a prelude to his own proposal, which will start in the next section.]

The final point Evans makes is that the fact that, e.g., imagined experiences or images of various sorts play a role in our thinking should not be interpreted as vindicating verificationism, as it might seem initially to do. Rather, he says that it is an index of the fundamental role that our conception of the spatial world plays in our thinking. (These last few paragraphs are a bit obscure. They are perhaps best read as his way of flagging the fact that he does not want to throw out the spatial representation baby with the verificationist bathwater, as Evans' own proposals make heavy use of spatial representation. Spatial representation of various sorts plays roles in both theories, but as it will turn out, rather different roles.)

4.3 The generality constraint

The basic idea of this section is quite straight-forward. It is the idea that thoughts are structured, in that an ability to think that a is F results from the joint exercise of two distinct abilities, the ability to exercise an Idea of a and the ability to exercise the concept of F . Given this, it follows that if a subject can think that a is F , and can also think that b is G , then that subject will have the ability to think that b is F and a is G . This constraint will be used to produce an objection to the photograph model, and will also be a motivation for Evans' account of what discriminating knowledge consists in (in Section 4.4).

Evans states that thoughts are structured, in that an ability to think that a is F is an exercise of two joint capacities: an ability to think of a , and an ability to think of F . Moreover, it is necessary for thoughts being structured that each of these abilities can manifest in multiple contexts. The ability to think of a must be able to manifest not only in thoughts such as a is F , but also a is G , a is H , and so forth. And the ability to think of F must manifest not only in the ability to think a is F , but also b is F , c is F , and so forth.

A very similar idea is common in linguistics, under the heading of compositional syntax/semantics. The idea is that the reason we have an ability to understand infinite number of sentences, even though we obviously have finite cognitive resources, is to be explained by the compositional nature of language, whereby recursive syntactic rules allow for an infinite number of syntactic formulae to be constructed from a finite vocabulary of basic symbols.

This is one idea behind Fodor's language of thought hypothesis, which invites us to understand the mechanisms of thought on analogy with the syntax/semantics structure of public language. Evans is clear, though, that he thinks the language of thought hypothesis is stronger than what he needs for the point he is insisting on here. The LoT hinges on the idea that there are mental symbols, corresponding roughly to words. Evans doesn't want to be taken to be endorsing that specifically. He thinks it is sufficient for the sort of structure he is concerned to point out that these are different abilities which can be manifested in different contexts. Possessing a LoT, with an inner set of symbols and processes comprising a system characterized by a combinatorial syntax and semantics might be one way to explain the fact that thought is structured, but not the only way, and not Evans' preferred way.

Evans' compares the structuring of thought with the systematicity one can find in language (public, overt language). Though Evans, on pages 101-102 uses the systematicity of language as an example to illustrate the GC, he makes it clear that this is just an analogy for illustrative purposes. This is because

thoughts are *essentially* structured, whereas linguistic expressions may or may not be so. It is entirely possible to have one word sentences which are really sentences, though not structured.

Suppressed in this discussion of the GC (but required for the conclusions Evans wants to draw) is the idea that these constituent capacities to have thoughts belong to one of some number of categories (analogous to the grammatical categories described in Chapter One), and that their combination is constrained by categorial appropriateness. So while it is possible to combine an Idea with a concept to arrive at a thought, such as the thought that *John is happy*, merely combining two Ideas, for instance of John and Hannah, does not yield a thought at all. This sort of categorial constraint, a mental analogue of a grammatical constraint, is not the same as the sort of constraint mentioned in footnote 17. There the issue is one of semantic appropriateness of the property and the object, thus ruling out thoughts such as that *the square root of 36 is happy*.

Evans closes the section by detailing how the photograph model can be in conflict with the GC. His target is Donnellan's claim that when a subject has a belief which would be expressed with the words 'a is F', that belief is about object x iff x is causally responsible for the belief. For example, when I, at a party, come to have a belief I would express with the words 'The man in the corner drinking a martini is a spy', my belief is about the woman in the corner drinking water if she was the object responsible for my belief, regardless of how misinformed I am about this person.

Evans expresses two misgivings. First, that a program such as Donnellan's, like any of the PM family, would violate Russell's Principle. Second, and more to the point in this chapter, Donnellan's apparatus, even if it works, seems capable of treating only beliefs, and thus is in principle applicable only to a small range of possible thoughts, and this is in violation of the Generality Constraint. By putatively circumventing the need to have an Idea of an object (conceived of as an ability essentially playing a role in structured thought), one can, with Donnellan's apparatus, have a subject that could putatively have a belief about an object to the effect that it is F , but not necessarily be able to even *think* that that very object is G or H .

Note that this applies straightforwardly to photographs. A photograph may be of the St Louis Arch, and may represent the arch as being tall. We might ask: why is the photograph a photo of the St Louis arch, and not a photograph of a duplicate of the St Louis arch at a Hollywood studio? The question could be made more pressing if it could be shown that a photograph taken in Hollywood looks exactly like the photograph taken in St Louis. Their identical pattern of pigments aside, the one taken in St Louis is *of* the St Louis arch because that was the arch that was causally responsible for the placement of pigments on that photograph. And the identical looking photograph taken in Hollywood is *of* the duplicate in Hollywood, because it was the duplicate that played the relevant causal role when the photo was taken. Evans would point out that the photograph, even if it is representing the St Louis arch as being tall, it is constitutively unable to represent anything else. It doesn't have the wherewithall to represent the St Louis arch being paisley, or the Arch d' Triomphe being tall.¹ It would thus fail the generality constraint. This is essentially how Evans will be using the GC to argue against the photograph model. The PM will attribute to subjects an ability to have beliefs about objects purely as a function of the causal ancestry of those beliefs. While Evans will agree that for some sorts of thoughts having the right kind of causal ancestry is necessary, it is not sufficient.

¹ Note that if you were to alter the photograph so that it would depict one of these situations, the photograph would cease to be a representation on the PM, since it would be you, and not the objects and properties causally responsible for the photograph's production, that was causally responsible.

4.4 The fundamental level of thought

*This is one of the most important sections of the book, as well as one of the most difficult. In it, Evans offers a minimal account for what is involved in thinking of an object in a manner that satisfies RP (in order to think of an object one must know which object it is one is thinking about). The account also explains why thought conforms to the GC. The basic idea is that for any particular object of a certain sort, there are individuation conditions, which Evans calls their **fundamental ground of difference**. It suffices to think of an object that one think of it as the object that possesses the individuation conditions it actually possesses. Such a thought would employ a **fundamental Idea** of the object. That is, in order to think of a G, one must have a grasp of the general conditions that distinguish the various Gs from each other, and also the specific conditions that distinguish that G from the other Gs. If this is right – and its denial seems implausible – the wherewithal to think of any object of type G via a fundamental Idea of it will entail the ability to think of many objects of that same type via their fundamental Ideas. It also entails that the subject will satisfy RP, since they will be thinking of the object via its individuation conditions. Similar points will hold for properties. Evans then argues that any thought about objects will rest ultimately upon a grasp of their fundamental Ideas. And so RP will be satisfied, and the GC explained.*

Evans' starting point is that in order to think that P , one must know what would make P true. In the case where P is 'a is F' this involves knowledge that requires an Idea of an object (the Idea of a), and an Idea of a property (the Idea of F ness). It's worth taking a moment to explore this claim. The practice of sliding back and forth between thoughts and the natural language expressions that might be used to report such thoughts can lead one astray here. Of course when we wish to discuss the thoughts that someone is entertaining, we must use spoken or written language, and so locutions such as 'Jones is thinking that *Smith is a spy*', or even Jones is thinking that $\langle a \text{ is } F \rangle$ (I use angle brackets for corner quotes) are unavoidable. And generally we would use the sentence that Jones herself would use to report the thought. The problem is in the other direction: there is a tendency to slide from the fact that Jones might utter a sentence, or repeat a form of words either overtly or via some sort of inner verbal imagery, to the conclusion that Jones is entertaining the thought that those words would typically be used to express.

Even if two subjects both confidently assert the sentence 'a is F', it seems we want to discern a difference between (as one might put it) someone who knows what they are talking about and someone who does not. Undoubtedly most readers of this can utter the sentence "P-adics are ultrametric." If we want to distinguish between those who understand what those words mean, and those who do not — those who can grasp the thought that *p-adics are ultrametric* and those who can't — it seems plausible to appeal to knowledge of what would make the thought true. And this resolves into two components: an Idea of the object (in this case a type, see below), and an Idea of a property. Or to put it in simpler terms, one must know what p-adics are, and what it means to be ultrametric. Parroting the sentence is insufficient.

The next topic is what constitutes an Idea of an object. For Evans, an Idea of an object is based on a 'conception of a world of such objects'. For every type of object, there will be individuation conditions — conditions that determine how many such objects there are, via determining when two objects are numerically identical. For example, integers are differentiated by their position along an infinite ordering (Evans is not claiming that there is only one way of stating individuation conditions). Two integers at the same position are *the same integer*. Two integers at different positions are not the same. And of course for temporal objects like sounds or trees, these criteria apply at a time.

For Evans, a *fundamental Idea* of an object is an Idea such that if one is thinking of an object by means of a fundamental Idea, then one is thinking of that object as having the fundamental ground of difference that it has. A non-fundamental Idea is an Idea of an object, but not one that exploits that object's fundamental ground of difference. An example would be the fact that I could think the thought *Lisa's favorite object is abstract*, and in so doing, be thinking of what is in fact a number. If Lisa's favorite object is the number three, then I would be thinking of the number *three* in entertaining this thought. But this would not be a fundamental Idea, because numbers are not individuated in terms of Lisa's attitudes of favor. On the other hand, if I think of the number three *as* the number three (meaning, as the integer between 2 and 4, or however you want to try to capture that linguistically), then I would be thinking of the number in terms of its fundamental ground of difference.

This can sound like a lot to swallow. But it's best not to think of this as a bunch of substantive theses, but rather as Evans providing some clean terminology for some very plausible and widely accepted ideas. To say that objects of a given kind have individuation criteria is not terribly objectionable. These criteria, for a given kind of object, are what Evans is calling their fundamental ground of difference. And it also seems to not be terribly objectionable to claim that sometimes our thought about a particular object might concern the object it concerns because the thought employs conceptual resources exploiting these individuation criteria. The ability to mobilize a conception of an object's fundamental ground of difference in order to think of it is for Evans *employing a fundamental Idea of that object*.

It follows that if one is thinking about an object in virtue of employing a fundamental Idea of that object, then one is satisfying RP, since one will be able to distinguish that object from all others. This is by definition of a fundamental Idea and of fundamental grounds of difference. If one is employing a fundamental Idea of an object, then one is thinking of it as possessing the fundamental ground of difference it in fact possesses. And this latter just is the individuation conditions that distinguish that object from all other objects of that kind.²

So far we have some terminology for, roughly, thinking of objects in terms of their individuation conditions. And we also have the suggestion that sometimes we can think of particular objects in terms of their individuation conditions (employing a fundamental Idea of that object), and sometimes we can think of objects on other ways (employing a non-fundamental Idea).

² It will be noted that we've moved from stating RP in terms of distinguishing an object *from all others*, to distinguishing an object *from all others of the same kind*. This makes sense – would we really want to insist that in order to think of the number 3 I would need to be able to distinguish it from all physical objects, or chess positions, or colors? The fact that an object is of type *G* already distinguishes it, in the relevant sense, from objects of all other types. What remains is to distinguish it from the other *G*s.

The next point is made in the two paragraphs from the top of p. 108 to the top of p. 109. It is that fundamental Ideas are involved not only in thinking of particular objects of type G as such (thinking of the number 3 *as the number 3*, as opposed to *as Lisa's favorite object*) but also in thought about G s as such. A couple of examples would be existential thoughts concerning G s (e.g. *there are integers greater than 100*) or thoughts concerning the type G (e.g. *numbers are abstract objects*):

A conception of a state of affairs involving a G is such in virtue of its being a conception of a state of affairs involving an object conceived to be distinguished from other objects by some fundamental ground of difference appropriate to G s, and hence as distinguishable, or differentiable, by citing a fact of this kind. (VR p.108)

So thoughts about G s are underwritten “by one’s general conception of the way in which G s are distinguished from one another, and from all other things.” (P. 100) Again, this is not implausible. Would we wish to credit to someone a grasp of the thought that *the p -adics are ultrametric* if they have no idea of the ways in which the p -adics are distinguished from other things, and from each other — that is, someone who couldn’t tell you whether p -adics are a techno artist, a type of mathematical object, or a synthetic protein.

Having discussed Ideas of objects, Evans turns on p. 109 to Ideas of properties. What Evans says is:

...it is knowledge which, when conjoined with that knowledge which constitutes possession of a fundamental Idea, δ^* , of a particular G , yields knowledge of what it is for the proposition $\langle \delta^* \text{ is } F \rangle$ to be true. (p. 109)

The typographical convention is that δ is an idea of a G (in general), an Idea of something differentiated from all other things by individuation conditions appropriate to G s; while δ^* is a particular fundamental Idea of some particular G — the number 5 say, or the color cyan. And the suggestion is, plausibly enough, that knowledge of an Idea of a property F is knowledge that could be combined with a fundamental Idea δ^* to yield knowledge of what would make $\langle \delta^* \text{ is } F \rangle$ true. Since the grasp of individuation conditions for G s is such as to not just individuate one particular G , but rather individuates G s in general, this knowledge entails that the subject knows what would make $\langle \delta \text{ is } F \rangle$ true, for G s generally. Notice that on this analysis of concept possession, concepts will satisfy the Generality Constraint — concepts are defined as knowledge that, when combined with some arbitrary fundamental Idea (δ^*) of an object of the G type (again, provided that objects of the G type are not semantically anomalous with F), is sufficient to provide the subject with knowledge of the truth conditions of the thought. But since the knowledge required to have a specific fundamental Idea δ^* requires knowledge of individuation conditions appropriate to G s, the thinker must be credited with mastery of many Ideas of the form δ . So if the subject has knowledge of what it means for an object thought about via some particular fundamental Idea δ_1^* to be F , then the subject will therefore have the wherewithal to entertain the thought that δ_2^* is F , and δ_3^* is F , for arbitrary fundamental Ideas δ_i^* .

The next topic is non-fundamental Ideas, Ideas that support a particular-thought of G s but employing an Idea that does not exploit fundamental grounds of difference concerning G s, something expressible as $\langle a \text{ is } F \rangle$. Here, a is a singular term, such as a proper name. The suggestion is that the non-fundamental Idea is one that specifies that it is about one object, but unlike a fundamental Idea it

does not involve conceptualizing the object as the possessor of the fundamental ground of difference that it in fact has.

A good way to understand what Evans is getting at with all this is to return to his discussion of verificationism. Recall that there were 1-step and 2-step verification procedures. In the 1-step procedure one would be presented with an object perceptually, and determine if it has the property. For propositions of the form a is F , there is a 2-step procedure: one first determines, of an object presented perceptually, if it is a ; and if it is, one then determines if that object has the property F .

The proposal here is analogous. Thoughts involving fundamental Ideas are analogous to propositions for which the 1-step procedure is applicable. The fundamental ground of difference of physical objects is their spatial location, and perceptual contact typically puts one in a position to know an object's location. Thus thoughts of *physical objects* employing fundamental Ideas will work almost exactly as 1-step propositions on the verificationist model. But for Evans, the key for this ground level is not that it is demonstrative/perceptual, but rather that it is fundamental in the sense of employing fundamental grounds of difference. This allows the model to apply to physical objects as well as other kinds of objects, such as abstract objects.

Thoughts employing non-fundamental Ideas will be analogous to the 2-step proposition verification procedure. That is, it is an Idea of an object such that knowing what it means for a thought employing it to be true involves two components: knowledge of what it means for some thought $\langle a = \delta^* \rangle$ to be true, and then knowledge of what it would mean for a thought of the form $\langle \delta^* \text{ is } F \rangle$ to be true. So a non-fundamental Idea might be the conceptual analogue of a definite description (*Lisa's favorite number*), or of a proper name (but see Evans' fn 30 on p. 107).

Evans then turns to generalizing this account to cover Ideas of temporal objects. Consider a proposition of the form $\langle \delta_{t'} \text{ [is] } F_t \rangle$ where $t' \neq t$. In such cases, the proposition is understood via an understanding of two propositions: one is what has just been discussed: $\langle \delta_t \text{ [is] } F_t \rangle$. The other involves one's knowledge of identity conditions for objects over time, which allow one to entertain propositions of the form $\langle \delta_t = \delta_{t'} \rangle$. For example, if I think of an elderly woman that she was once a great ballerina, this proposition, in order to be understood, must be articulated. Suppose that t is now, and t' is some time in the past when the woman in question was a ballerina. Then the proposition 'This woman was a great ballerina' is of the form $\langle \delta_{t'} \text{ [is] } F_t \rangle$. I must know what it would be for something like $\langle \delta_t \text{ [is] } F_t \rangle$ to be true, that is, what would make it the case that someone is a now great ballerina, and furthermore, I must have a grasp of identity conditions on objects (in this case persons) which allows me to understand $\langle \delta_{t'} = \delta_t \rangle$, that is, this elderly woman I see in front of me is the same woman who in the past was a professional dancer.

For non-fundamental Ideas, *three* propositions are involved. A proposition of the form $\langle a \text{ [is] } F[t] \rangle$ involves

- i) knowledge of what it would be for a proposition of the form $\langle \delta_{t'} = a \rangle$ to be true.
- ii) knowledge of what it would be for a proposition of the form $\langle \delta_t = \delta_{t'} \rangle$.
- iii) knowledge of what it would be for a proposition of the form $\langle \delta_t \text{ [is] } F_t \rangle$ to be true.

Evans closes by reiterating how this account explains the generality constraint. The key bit is the claim that in order to think of any object one must understand the individuation conditions for objects of that type (their fundamental ground of difference) and the particular conditions possessed by that object that differentiate it from others of that type. So if one has the wherewithal to think of one such object, one will be able to entertain thoughts about many objects of that type. Similar points would hold for properties. In order to grasp a thought attributing some property F, one would need to know what individuates that property from others of that type (*red* vs *blue*, for example).

4.5 Comparison with verificationism

Evans draws attention to the similarities between his account and that of the ideal verificationist.

In both cases (Evans' account as articulated in 4.4, and the ideal verificationism of Dummett described in 4.2) there are two sorts of propositions/thoughts, which we might call basic and non-basic. For the verificationist, basic propositions are those whose truth can be determined directly via an assessment of the applicability of the predicate to a demonstratively identified object. Non-basic propositions (employing names rather than demonstrative identification) involve a two step procedure, the ability to determine of a demonstratively identified object whether it is the bearer of the name, and then a determination of the basic type explained above.

Evans' account retains much of the same structure. Instead of understanding a basic proposition as resting on an ability to verify applicability of a predicate to an object given demonstratively, it recognizes a type of thought about an object that consists in the use of knowledge of the fundamental ground of difference of such an object, and what it means for an object so identified to have this property. The other sort of thoughts involve a two step procedure: first, an identity between a non-fundamental Idea of an object and a fundamental Idea (linking the name to the correct Idea); and then the fundamental thought-procedure as above.

The differences are that Evans has not taken demonstrative identification, or any other specific kind of identification, as basic. And because actual encounters such as would be required to support demonstrative identification are not necessarily basic, abstract, small, distant, and past/future objects are not the problem for his account that they are for the verificationist. Moreover, it explains why the verificationist model has some appeal in the case of demonstratively identifiable objects. For spatial objects, their fundamental ground of difference is their spatial location, and the prototypical way we can assess the precise spatial location of a physical object — that is, when we can employ a fundamental Idea of that physical object — is when we can perceive it. So for one type of object there is overlap between the two approaches. The difference is that Evans' is based on a general account that applies to various kinds of objects as special cases, whereas the verificationist approach is based on a perceptual model, and then other kinds of case are shoehorned into this model.

Finally, he mentions that his program has the virtue of making sense of the spatial imaginings discussed in 4.2 (imagining the man who made the table, or imagining the solar system from above). The fundamental ground of difference of spatial objects is their location in space, and so when thinking

of arbitrary spatial objects we invoke a general idea of their fundamental ground of difference – that is, we imagine them as being in space.

When we represent material objects in the imagination, we *ipso facto* represent them as located and differentiated in space. We imagine the carpenter, as in the example of 4.2, as located in a particular position in space, though, of course, there is no particular position we imagine him as having. Such representations of objects in the imagination are just like *arbitrary* fundamental Ideas (to be understood on the model of the arbitrary names of certain formal systems). (p.114)

4.6 The counter-examples

In this section Evans returns to the two examples involving the steel balls, and argues that the claim that the subject could issue a thought about just one of the balls — which would constitute a violation of Russell's Principle — is an unattractive one for a number of reasons.

Evans' initial discussion includes a couple of things that would have been helpful in the previous section. The first is the claim that thoughts based on definite descriptions or recognition capacities are non-fundamental. This was implicit in the previous section, but it's nice to have it explicitly stated. The next is a bit of new terminology: *adequate Idea*. This is an Idea that is fit to support genuine thought, and this will include fundamental Ideas, and any non-fundamental Ideas for which the subject has an ability to decide the truth of propositions of the form $\langle \delta = a \rangle$. This presumably leaves open a potential class of inadequate Ideas, which would be any idea that is neither fundamental, nor one for which the subject has the capacity to identify with a fundamental Idea.

The point is that definite descriptions and recognitional capacities are adequate because they give the subject the capacity to make a specific identification of a single object of the relevant sort, that is, to assess it as identical to an Idea such as δ^* . Evans frames his discussion of the steel ball examples in terms of whether or not the subject has an adequate Idea of them. She is no longer seeing them, and by hypothesis she has neither a recognitional capacity, nor is employing any uniquely distinguishing description. So if thought about one of the balls is possible, it must be because some other kind of Idea is also adequate.

The case, recall, was one in which a subject encountered two identical rotating balls, and at a later time, attempts to think about just one of them. The example was supposed to target Russell's Principle via questioning whether it would be possible for the subject to think about one of the balls even though she had no discriminating knowledge of that ball nor any recognitional capacity for it. Evans now argues that in fact the subject cannot think about one of the balls (an argument similar to the one given in 4.1). The part of the argument given on this page is that, supposing she has a fundamental Idea of a steel ball (one sufficient for an existential thought, a ' δ ' in the terminology of the last section), can she understand what it would be for 'that ball' (the one he is attempting to think of) to be the ball putatively identified by his Idea? The proposition in question is the one I labeled (i) above: does the subject know what it would be for a proposition of the form $\langle \delta^* = a \rangle$ to be true (where the 'a' is 'that

ball')? Since there is nothing in the subject's 'conceptual repertoire' that could possibly make a difference between the subject's Idea being of 'that ball' versus the other ball, Evans holds that she cannot. In order for the counter-example to work, it will be necessary to suppose that the subject's thought does manage to home in on one of the balls. Most people I've talked to who resist this do so because they are surreptitiously crediting to the subject the use of discriminating descriptive features.

Evans compares such a supposition to Chisholm's contention that if a brain were divided such as to yield two persons, the original person would survive *only in one*, even though there would be no behavioral or other empirically accessible difference between them. Furthermore, he claims that "Chisholm takes himself to be able to grasp the supposition '*This one, not that one, is the original person*.'" Evans claims that such a claim is questionable. That in absence of any possible empirical means of telling the difference between the two hypotheses, the supposition that one has a grasp of the difference is illusory. (Note that this isn't exactly a verificationists position: the claim is not that without an empirical difference between two situations there is (metaphysically, so to speak) no difference; it is rather than without any possible empirical difference the claim that one can grasp or understand the difference is illusory.)

Evans anticipates an objection to his reasoning, pointing out a disanalogy between the steel ball case and the Chisholm case. In the case of the steel balls, the proponent of the photograph model can suppose that the subject's ability to launch a thought at exactly one of the balls is underwritten by his causal contact with one of the balls, or more accurately from the fact that one of the balls is causally responsible for the information that the subject has about the balls. Evans has two connected replies to this.

The first is in the last paragraph of p. 116. Recall Evans' starting point in Section 4.4, the claim that "in order to think that *P*, one must know what would make *P* true." The PM theorist is claiming that having the right causal antecedent is sufficient for such knowledge. Against this, Evans argues that this is, at best, a fairly radical view of what such knowledge can consist in. It entails that two subjects equally mathematically clueless could be such that one of them knows what would make "p-adics are ultrametric" true, while the other does not, simply based on the fact that one of them heard the sentence from a mathematician and the other saw it spelled out by scrabble chips thrown on a board. It does seem like a stretch to credit to someone "knowledge of what would make *P* true" simply because a state had a certain causal antecedent.

...how can we suggest that the subject knows what it is for the identification ($\delta^* = \text{that ball}$) to be true, when he has not an inkling of the kind of consideration that in fact would make it true? (p. 117)

This is similar to the sort of consideration I brought forward at the beginning of my discussion of Section 4.4.

Evans now turns (middle of p. 117) to a potential counter to this argument as presented above. The counter is that one can know that 'This is water', when what makes it true that the stuff is water is the fact that that stuff is H₂O, even though the subject has no inkling of what H₂O is. That is, this seems to be a case where a subject can know that *P* is true, while having no inkling of what makes it true.

Evans' answer to this is that, in effect, though the subject does not know what *specifically* makes the proposition true, he does, and must, know what sort of thing would make it true — namely that there is *some* characterization or essence which applies both to the stuff he is identifying, and the stuff in rivers and lakes. He does not know what this characterization is, but he knows there must be one. He knows that the proposition 'this is water' is true in virtue of some other proposition 'this is H', where *H* is schematic for some suitable characterization or other of water.

Though Evans doesn't put it quite this way, what he is saying is that the only way to make the steel ball case parallel to this would be to allow the subject to suppose that what makes it true that *this ball is that ball* would be to understand the subject as thinking that the proposition is made true in virtue of a certain kind of causal connection. This is the supposition in the case of the steel balls that plays the role analogous to the role played by "this is H" in the case of the water thought. But by hypothesis we are not allowing this, because if we do then the case is not a counterexample to RP, rather it is one in which the subject identifies the right ball on the basis of a definite description involving causal relations.

Finally Evans addresses the following adversarial line of thought (paraphrased from the top of p. 118): The verificationists have given an analysis of what it is to know the truth conditions of a proposition. Their answer seems to be about the best one going. Nonetheless, they have difficulties with thoughts concerning certain things, such as space, time, theoretical entities like neutrinos, etc. Given that there are things like time and neutrinos that we have to admit that we have knowledge of despite the fact that we cannot give an account of our knowledge of the truth conditions for propositions involving reference to such entities to be true, we may as well also drop the requirement that understanding a sentence with other singular terms requires the audience to know which object is in question. In short, since we have to give up the idea that we have knowledge of truth conditions anyway, why not just drop Russell's Principle?

Evans' response is that just because there are some things which are difficult for the verificationist, it does not follow that we can just give up and drop all empirical constraints on thought. And so if we don't allow the hasty generalization from the troublesome cases to cases like the steel balls, the opponent to RP must argue that the move is not one of generalization — that the steel balls are sufficiently like the troublesome cases (time and neutrinos).

The problematic cases fall into two classes: on the one hand our concepts of space, time and matter; and on the other, concepts supported by specific empirical theories. He claims that the case of the steel balls cannot be assimilated to either. It cannot be assimilated to the case of theoretical knowledge, because there is no theory. And it cannot be likened to the case of the verification transcendence of space, time, and matter (our conception of an objective world). Evans concludes that the case is not like the others whose problematic nature is undeniable. Furthermore, as he has shown, treating the PM answer as a case of knowing which object is in question is inconsistent with the correct notion that knowledge must consist in capacities that the subject has, and thus would involve an overthrow of any reasonable account of concept possession.

In the next chapter, Evans will explain why it seems *natural to say* that the subject was thinking of just one of the balls, even though he was not. This explanation will take much of the motivation from the PM's sails.

