

## Class 9 - Direct Reference

### I. Simple descriptivism, and a criticism

The wide-ranging effects of Kripke's work in *Naming and Necessity* are difficult to measure. In addition to the central themes in philosophy of language, it has important ramifications for philosophy of mind, philosophy of science, metaphysics, epistemology, logic, and other areas of philosophy. Our focus will be on Kripke's defense of Mill's non-connotative account of the reference of proper names against the descriptivist accounts we find in Frege, Russell, and Strawson. (Though Russell had provided a Millian account of logically proper names, sentences with what we ordinarily call proper names are, for Russell, to be analyzed as disguised descriptions.)

We already saw that Frege and Russell held different kinds of descriptivism. Frege's version descriptivism claims that the sense of a name is the description associated with it by the user of the name. Russell thinks that there are no senses of names, but that a correct analysis of sentences including proper names would replace the name with the description for which it is an abbreviation. Both Frege's sense descriptivism and Russell's abbreviational descriptivism were simple versions of the theory. Both versions are liable to a standard objection, which Kripke rehearses, p 291.

To understand the objection, recall that we call sentences like:

1. Bachelors are unmarried.

analytic because all we have to do to determine the truth of 1 is examine the meaning of the term 'bachelor'.

We need not examine any bachelors.

Thus, we take such analytic statements to be knowable a priori, and to be, in some sense, necessarily true.

Let's say that we associate with Aristotle the description that he was Plato's most famous student.

It follows that the meaning of 'Aristotle' includes the fact that he was a student of Plato.

Then:

2. Aristotle was a student of Plato.

turns out to be an analytic truth, just like 1.

If Aristotle just means or abbreviates the description, all we have to do is analyze the term 'Aristotle' to find out that he was a student of Plato.

On simple descriptivism, 2 should also be knowable a priori and necessary.

But, 2 is, in fact, contingent, knowable only a posteriori, and synthetic.

So, the simple descriptivism of Frege and Russell is untenable.

This objection to simple descriptivism can be put succinctly as follows.

- SD1. For simple descriptivism, 'x is p' is analytic, knowable a priori, and necessary for any  $p \in$  characteristic description of x.
- SD2. But, many characteristic properties of many objects are synthetic, knowable only a posteriori, and contingent.
- SDC. So, simple descriptivism is wrong.

## II. Cluster descriptivism

Strawson's version of descriptivism is more sophisticated, and more like the version Kripke criticizes. It may be called cluster descriptivism (CD).

Strawson's work influenced Searle, who is the source of the theory that Kripke attacks.

We are not reading Searle's "Proper Names" (or the most-relevant Strawson article), but it is in the book, as is his response to Kripke, in "Proper Names and Intentionality;" these would make for good paper topics.

Searle argues that a name must be logically connected with its characteristic description because that is the only way the name could get tied to the object.

We need to identify the object, through description or pointing, in order to name it.

But then those characteristics must be part of the description of the name.

Searle says that the name does not mean its characteristics, but that there is a loose logical connection.

Kripke presents the cluster description theory with a series of claims to which the theory is committed, at the beginning of Lecture II, p 294:

- CD1. Every name 'n' is associated with a cluster of properties: the properties that x believes are true of n.
- CD2. x believes that these properties pick out a unique individual.
- CD3. If y has most of these properties, then y is the referent of 'n'.
- CD4. If nothing has most of these properties, 'n' doesn't refer.
- CD5. The sentence 'n has most of these properties' is known a priori by x.
- CD6. The sentence 'n has most of these properties' as uttered by x expresses a necessary truth.
- CDC. These properties must be chosen in such a way that there is no circularity. (The properties must not use the notion of reference.) (This claim is not a conclusion, but a non-circularity condition that underlies the other six claims.)

CD avoids some portion of the standard objection to descriptivism, SD.

Since being Plato's greatest student is just one of many properties in the cluster, it does not follow from CD that 'Aristotle is Plato's student' is a necessary truth.

CD thus avoids the claim that any particular property in the cluster is a necessary property.

Kripke paints an accurate picture of the cluster theory, pp 296-7.

### III. Kripke against descriptivism

Kripke's criticism of the cluster theory picks up on Donnellan's insight that reference may be successful under a false description of an individual.

We can successfully pick out the man in the corner drinking water, even if we describe that person as 'the man in the corner drinking a martini'.

Kripke asks about the case in which what we know about a person is incorrect, so that any description we give of that person is entirely false.

In such a case, on no version of descriptivism could we successfully refer.

The cluster version allows us to be wrong about some of the properties of the object.

Aristotle could have never studied with Plato.

But, by CD4, reference would fail if every characteristic we associated with Aristotle were false.

Kripke argues that what one uses to pick out the object are not essential features (senses) of the object. Briefly:

Against CD2, Kripke presents the Feynman case, p 297.

Against CD3, Kripke presents the Gödel case, p 298.

Against CD4, Kripke presents the Jonah case, p 299.

Against CD5 and CD6, Kripke revisits the Aristotle case, p 295-6.

CD2 requires that the definite description that the speaker associates with the name be sufficient to pick out a unique individual.

But often we do not have enough information to pick out one and only one person with the information that we associate with that individual.

In the case of Feynman, many people can use his name to refer successfully, even though many of them can not tell you anything more about the man than that he was a famous physicist.

They could not, for example, distinguish him from other physicists, like Stephen Hawking.

'Famous physicist' could describe many people, and not pick out any unique individual.

Still, people use 'Feynman' to refer to Feynman.

CD3 says that when we use a name, we refer to the person who has the majority of the characteristics we associate with that name.

Most people's cluster of information associated with Gödel includes mostly the fact that Gödel was the man who proved the incompleteness of arithmetic.

Kripke asks us to imagine that Gödel had stolen the proofs from a man named Schmidt.

Then the only characteristic that most people associate with 'Gödel' turns out to be false of Gödel, but true of Schmidt.

So, when we use 'Gödel', according to the descriptivist, we are actually referring to Schmidt.

Kripke urges that we still refer to Gödel when we use his name, and thus that CD3 is wrong.

Further, in the Jonah case, Kripke argues that everything we know about Jonah is wrong.

There was a Jonah, according to Kripke's story.

But, he never went to Nineveh, or rode in the belly of a whale, or did any of the things that we associate with him.

We can still refer to that person.

But, CD4 says that we can not.

Against CD5 and CD6, Kripke speaks strongly.

It just is not, in any intuitive sense of necessity, a necessary truth that Aristotle had the properties commonly attributed to him. There is a certain theory, perhaps popular in some views of the philosophy of history...according to [which] it will be necessary, once a certain individual is born, that he is destined to perform great tasks and so it will be part of the very nature of Aristotle that he should have produced ideas which had a great influence on the western world. Whatever the merits of such a view may be as a view of history or of the nature of great men, it does not seem that it should be trivially true on the basis of a theory of proper names. It would seem that it's a contingent fact that Aristotle ever did *any* of the things commonly attributed to him today, *any* of these great achievements that we so much admire... (295-6)

If all of the properties we attribute to an individual are contingent, then not only is it not necessary that it have most of them, it might even lack all of them.

We could not know something to be true a priori, if it could in fact be false.

#### IV. Rigid Designation

If description theory is wrong, even in its most plausible form, then we must pick out our references by using terms without any necessary connections to their meanings or characteristic extensions.

Thus, names, for the purposes of reference, will be entirely non-connotative, in Mill's sense.

Kripke calls such reference rigid designation.

A rigid designator is a term that names the same object in all possible worlds, in all counterfactual circumstances.

To show that names are rigid designators, Kripke uses the examples of Ben Franklin and Nixon.

Consider:

3. Ben Franklin is the inventor of bifocals.

Even if 'the inventor of bifocals' referred to some one else, 'Ben Franklin' would still refer to Ben Franklin.

Thus, 'the inventor of bifocals' refers non-rigidly, whereas 'Ben Franklin' refers rigidly.

'Feynman', 'Gödel', 'Jonah', and 'Aristotle' all refer rigidly, too.

The notion of rigid designation is no more contentious than the notion that we can say something coherently counterfactual about objects.

If we say that I would have been happier had you brought me a cheesecake is just to say that there is another possible world, in which I exist, and in which you brought me a cheesecake.

Thus, 'I' rigidly designates me, in the other possible world.

As Kripke says, we stipulate other possible worlds under the assumption that we can refer rigidly, p 294.

Consider

4. Nine is greater than seven.

4 is true in all possible worlds, since 'nine' and 'seven' rigidly designate particular numbers.

Since 'nine' refers to the same thing in all possible worlds, and 'seven' refers to the same thing in all possible worlds, if nine is greater than seven in any world, it will be greater than seven in all worlds. Compare 4 with

5. The number of planets is greater than seven.

5 is true, but it might be false.

The difference between 4 and 5 is that 'the number of planets' is not a rigid designator.

In some possible worlds, there are fewer planets.

In other possible worlds, there are more planets.

'The number of planets' thus non-rigidly designates a different number in different possible worlds.

Notice that since four plus five is identical to nine, we can substitute, *salva veritate*, 'four plus five' for 'nine' in four:

4'. Four plus five is greater than seven.

And since the number of planets is in fact nine (ignoring Pluto's demotion) we can substitute 'four plus five' for 'the number of planets' 5, yielding the same sentence.

But, consider two slightly different sentences:

6. Necessarily, nine is greater than seven.

7. Necessarily, the number of planets is greater than seven.

If we substitute 'four plus five' for 'nine' in 6, we continue to get a true statement.

6'. Necessarily, four plus five is greater than seven.

But, if we substitute 'four plus five' for 'the number of planets' in 7, we go from a true statement to a false one.

7'. Necessarily, the number of planets is greater than seven.

The failure of substitutivity should look familiar to you.

It looks exactly like the failure from:

8. Lois Lane believes that Clark Kent is a reporter.

to:

8'. Lois Lane believes that Superman is a reporter.

even though 'Clark Kent' and 'Superman' refer to the same person.

In other words, modal operators form opaque contexts, just like the propositional attitudes.

## V. Identity, necessity, and Frege's puzzle

The term 'necessity' can be misleading, especially when it is confused for an epistemic notion.

Kripke takes care to use only a metaphysical notion of necessity.

On the metaphysical notion, a statement is necessary if it is not possible that it be false.

Another way to characterize metaphysical necessity is as truth in all possible worlds.

Of course, necessity and possibility are tightly linked.

In alethic modal logic, We use ' $\Box$ ' as a necessity operator, and ' $\Diamond$ ' as a possibility operator.

Then, possibility and necessity are inter-definable.

$$9. \Box P \text{ iff } \sim \Diamond \sim P$$

$$10. \Diamond P \text{ iff } \sim \Box \sim P$$

In fact, most systems of modal logic take one of the operators as basic, and introduce the other by definition.

Notice that identity statements between rigid designators must be necessary.

Let's say that a is identical with b, where 'a' and 'b' are names (rigid designators).

Then, 'a' refers to a in any possible world, and 'b' refers to b in any possible world.

There could be worlds in which 'a' did not refer to a.

For example, there could be worlds in which Paris Hilton is named 'Priscilla G. Snodgrass'.

But, she would still be Paris Hilton.

The term, 'Paris Hilton', used in our world refers to Priscilla G. Snodgrass in her world.

So, if a is identical to b, where 'a' and 'b' rigidly designate, then there are no possible worlds in which a is not identical to b, nor where 'a=b' is false, if those terms refer as they do in our world.

There are possible worlds in which 3 is false, because 'the inventor of bifocals' refers, in any possible world, to the actual inventor of bifocals.

In some possible worlds, Franklin was not the inventor of bifocals.

But, in all possible worlds Franklin was Franklin.

That is, 3 has one rigid and one non-rigid designator, so it is not a necessary truth.

On the other hand,

$$11. \text{Russell is Professor Marcus.}$$

is true, in all possible worlds, even though there are some possible worlds in which I did not become a professor.

We use 'Professor Marcus' in this world to refer to me, in all possible worlds.

Similarly,

$$12. \text{Hesperus is Phosphorus.}$$

expresses a necessary truth.

That 12 is necessary may seem odd.

For, we have made a big fuss over the problem of cognitive content, contrasting 12 with the obvious, and

knowable a priori:

13. Hesperus is Hesperus.

But notice that the claim that 12 is a necessary truth does not entail that it has the same cognitive content as 13.

A version of Frege's puzzle arises here if we think that all necessary truths are knowable a priori.

Then, 12, since it is necessary, would be knowable a priori just like 13, and we would have difficulty explaining how what seems to be an empirical discovery is knowable a priori.

Further, if all a priori statements were analytic, then we would have the further question of how 12, which appears paradigmatically synthetic, could be analytic.

On the other hand, if the category of necessary truths were distinct from that of statements knowable a priori, or analytic claims, then this version of the problem of cognitive content does not follow.

We can tell that 12 is not knowable a priori, even if it is necessary, since we could be in the same epistemic situation as we are, with Hesperus not being identical to Phosphorus, p 303.

Kripke asks us to distinguish among semantic claims (involving analyticity, syntheticity, synonymy, etc.); epistemic claims (involving apriority and aposteriority); and metaphysical claims (involving necessity and contingency), p 293.

Traditionally, it was believed that all and only necessary claims were known a priori.

Contingent claims were known from experience.

Further, it was traditionally (before Kant) supposed that the way we know a priori claims is by analysis.

So, all necessary claims are known a priori because they are analytic.

And all contingent claims are known a posteriori because they are synthetic.

Kant threw a little twist into that story by claiming that there are synthetic a priori claims, like those of mathematics.

Kripke claims both that there are necessary truths that are known a posteriori, and that there are a priori but contingent truths.

## VI. The necessary a posteriori and the contingent a priori

Consider the identification of heat with molecular motion.

Kripke argues that 'heat' and 'molecular motion' are rigid designators.

'Heat' is a rigid designator, since in counterfactual situations in which people, or Martians, did not feel warmth when putting their hands near fires, we would not say that they did not feel heat.

We would say that they get a different sensation from heat than the one that we get.

Even if there are no people to feel it, fire heats up the air around it.

Heat thus rigidly designates molecular motion.

Similarly, 'molecular motion' is also a rigid designator, referring to the same thing, the motion of molecules, in all possible worlds.

Thus, the identification of heat with molecular motion is necessary.

Our discovery of that fact is a posteriori: we discovered it empirically.

That there are people who feel heat in a certain way is contingent.

Our skin could be constructed differently, say made of asbestos.

But we should not confuse the contingent property of heat (that people feel it in a particular way) with a necessary property of heat (that it is molecular motion.)

That we discovered that heat is molecular motion is also a contingent fact.

For aeons, people had no idea that heat was molecular motion.

They did not even know what a molecule was.

But, that contingent (epistemic) fact about our knowledge is irrelevant to the (metaphysical) fact about the nature of heat.

Thus, the identification of heat and molecular motion is necessary, but known only a posteriori, in contrast to what every in the history of philosophy ever thought.

Conversely, that the standard meter bar is one meter is a contingent fact.

It could be otherwise, longer or shorter.

But, it is known a priori that the standard meter is one meter.

So, 'the standard meter is one meter long' is contingent, but known a priori.

According to Kripke, the identifications of water with H<sub>2</sub>O and of lightning with electrical discharge are necessary, just like the identity of heat with molecular motion.

There is a contingent fact about how we experience heat, or lightning, or water.

We pick out heat, or light, according to contingent facts about how they effect us.

But, all theoretical identity statements are, in fact, necessary identities, not contingent identities, p 301-3.

The necessity of these theoretic identification statements follows from the rigid designation of their terms.

## VII. Rigidity and the philosophy of mind

Kripke's work on necessity and rigidity has ramifications for the identity theory in the philosophy of mind.

The identity theory says that mental states are actually physical states: the mind is the brain.

Kripke claims that pain is a rigid designator.

Nothing could be a pain if it did not hurt in the way that pains do.

Similarly, if 's' designates a brain state, it does so rigidly.

The identity of any two rigid designators must be necessary, since neither term could refer to anything other than its referent.

Since theoretical identity statements are necessary, according to Kripke, the identification of pain states with brain states must also be necessary.

But, it seems clearly possible that pain could be something other than a particular state of the brain.

If so, then the identity of the two must be contingent.

So, the necessary identification must be false.

That is, the identity can be neither necessary nor contingent.

So, pain states must not be identical to mental states.

The relationship between pain states and mental states must be weaker than identity.

Briefly, Kripke's argument is:

- I1. The identification of mental states and brain states must be either contingent or necessary.
- I2. Since mental states and brain states refer rigidly, the identification can not be contingent.
- I3. Since it is possible that mental states are not states of the brain, the identification can not be necessary.
- IC. Thus, mental states and brain states must not be identical.



### VIII. The causal theory of reference

The problem before us was whether we refer directly, or through a description.

On the direct reference side, we have Mill; the referential half of Donnellan; Kripke; and Russell, for logically proper names.

On the descriptions side, we have Frege; Russell, for most sentences; Searle; and the attributive half of Donnellan.

The arguments for descriptions include Frege's solutions to his three puzzles, and Russell's analysis of denoting phrases, motivated by the falsity of 'the king of France is bald' and 'the king of France is not bald'.

Simple descriptivism fell to the standard objection (SD, or the Aristotle problem).

Adopting the cluster theory blocked SD, to some degree.

But, Kripke showed that there remained grave problems with description theory.

He argued that the role of the subject of many sentences is just to refer, not to describe.

Kripke's arguments provide evidence of deficiencies in description theory.

But they do not necessarily defeat the theory.

One piece of information that people ordinarily do know about a person when they successfully refer to that person is that the person is commonly known by that name within a population.

This observation led some philosophers to develop a meta-linguistic descriptivism.

Kent Bach argued that the sense of a name, say 'Brad Pitt', is:

#### 14. The bearer of 'Brad Pitt'

Jerrold Katz argues that the sense of 'Brad Pitt' is:

#### 15. The thing which is a bearer of 'Brad Pitt'

Each of these analyses of senses of names is meta-linguistic, since the sense of the name is not expressed within the language in question.

We do not, for example, replace 'Brad Pitt' with its description.

We will not pursue meta-linguistic descriptivism, but it would (again) make a good paper topic, especially concerning how these approaches deal with the problem of names without bearers.

The central motivation for descriptivism in any version is the belief that we need it in order to make sense of reference.

How else could people pick up a name in the first place?

Kripke, and some followers of Kripke, like Gareth Evans (whose article "The Causal Theory of Names" is worth reading) developed a causal theory of reference to answer the charge that only descriptivism could account for reference.

The causal theory of reference (CTR) supports, to some degree, Kripke's work on rigidity, by providing an account of how we can learn names without ascribing senses to names.

CTR, though, is technically an independent account of an independent question.

Descriptivism and rigidity are claims about the meanings (or semantic values) of names.

CTR is a theory about how we learn names.

The first are semantic claims, and the second is epistemological.

Kripke sketches CTR in his discussion of Feynman, p 299.

The picture that CTR provides involves two elements.

An object is named through an initial baptism.

We can baptize through ostension, by pointing at an object.

Or, we can baptize by describing an object.

For instance, I can say that the next apple I see I will call Henry.

After baptism, a causal chain connects referrers to the initial object.

I dub the apple Henry, then you hear me, and tell others, and eventually everyone calls the apple Henry.

Thus, we might say that a use of a name refers to an object iff there has been an appropriate causal chain from the initial baptism, through all users of the name, which ends in the particular use in question.

Among the difficulties with CTR are problems with kinks in the causal chain.

The name 'Madagascar' used to refer to part of the mainland of Africa.

Through mis-communication, involving, I believe, Marco Polo, it has come to denote an island off of the mainland.

There was a baptism (presumably) and then a causal chain, but current uses now refer to something other than the original place.

The notion of a causal chain is also contentious.

But, as CTR is not an essential part of the 'Fido'-Fido theory we are now considering, we will not pursue these worries.

What is important to take from the discussion of CTR is the role of the community in naming, p 300.

We will return to this role in Putnam's division-of-linguistic-labor hypothesis.

## IX. Problems with direct reference

Frege's sense descriptivism was motivated by three problems with the 'Fido'-Fido, direct reference theory.

Direct reference theories have difficulty explaining Frege's puzzle, what happens in opaque contexts, and the possibility of vacuous reference (Santa Claus), including the problem of negative existentials (Pegasus).

The re-emergence of the 'Fido'-Fido theory has led to a lot of work on Frege's puzzle.

Contemporary, direct-reference treatments of Frege's puzzle would make another good topic for a paper.