

## A Primer on Kripke's "Identity and Necessity"<sup>1</sup>

### 1. Rigid designation

- An expression is a *rigid designator* if it designates (i.e., picks out or refers to) the same thing in all possible worlds in which that thing exists.
- An expression is a *non-rigid designator* if it does not designate the same thing in all possible worlds in which it exists.
- Example: The definite description, "the first Postmaster General of the United States" is an example of a non-rigid designator. In the actual world, this expression designates Benjamin Franklin, but there are other possible worlds in which someone other than Ben Franklin would have been the first Postmaster General of the US. With respect to those worlds, the description (meaning, of course, what it does in our world) would designate that other person.

- An intuitive test for rigidity:

Consider the following biconditional:

(IT)  $x$  might not have been (identical to)  $x$

If, when you replace the ' $x$ ' in this biconditional with a designator, and there is *no* interpretation of the resulting sentence on which it makes sense to suppose that it is true, then, according to Kripke, that suggests that designator is rigid. If, however, there is an interpretation on which it is true (even if there is also another interpretation on which it would come out false), then the designator is definitely non-rigid.

- According to Kripke, ordinary proper names and natural kind names are rigid designators. Try out Kripke's test on a non-rigid designator like 'the inventor of bifocals' and on an (according to Kripke) rigid designator like 'Colin Diver'.

### 2. Rigid designation and identity claims

- It follows from the definition of a rigid designator that if ' $a$ ' and ' $b$ ' are rigid designators, then the proposition expressed by an identity sentence formed by flanking the identity sign with these two expressions:

$$a=b$$

is, if true, *necessarily* true—true in all possible worlds.

- In other words, if ' $a$ ' and ' $b$ ' are rigid designators, then if  $a=b$ , then  $\Box(a=b)$ . For if ' $a$ ' refers to the same thing in all possible worlds and if ' $b$ ' refers to the same thing in all possible worlds, then if ' $a=b$ ' is true, then ' $a$ ' and ' $b$ ' refer to the same thing  $e$  in this world. Since they both refer to the same thing in all possible worlds, they will both refer to  $e$  in all possible worlds. From this, it follows that ' $a=b$ ' is true in all possible worlds—which is just to say that ' $a=b$ ' is necessarily true.

- As a consequence, an identity *statement* can be contingent only if at least one of the designators flanking the identity sign (so to speak) is non-rigid. The word 'statement', here, is crucial. Though identity *sentences* (pieces of language of the form  $[a=b]$ ) can be contingent, Kripke insists that no entity can be contingently identical to itself. That is, Kripke defends the necessity of identity:

(NI)  $(x)(y) (x=y \supset \Box(x=y))$ .

If entity  $x$  is identical to entity  $y$ , then they are necessarily identical. That is, if  $x$  is one and the same thing as  $y$ , it is impossible for them to be distinct things.

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<sup>1</sup> The material on the handout is freely adapted, with little modification, from a handout distributed by William Taschek for Philosophy 200 during the fall semester of 2004. William is a professor in the philosophy department at Ohio State University who spent last year teaching at Reed.

### 3. Kripke on theoretical identity statements

- Theoretical identity statements: identity statements in which the terms are (according to Kripke) rigid natural kind terms. A natural kind term is a piece of language that designates or picks out a natural kind—a kind that arises in nature.<sup>2</sup>

- Consider the following examples of theoretical identity statements:

(1) Water = H<sub>2</sub>O

(2) Heat = mean molecular kinetic energy

If Kripke is right that the expressions flanking the identity signs here are rigid designators (do they pass the intuitive test?), then, on the assumption that these identity claims are true, they must be *necessarily* true.

- However, historically, philosophers who have considered such theoretical identity statements have assumed that they are only *contingently* true. (Remember Smart!) How are we to account for this “common” intuition that these sentences, if true, express “contingent identities”?

- This intuition is expressed in a variety of ways (even by Kripke in the course of his discussion). Here are some common ways of doing so:

(a) It might have turned out that water isn't H<sub>2</sub>O.

(b) Water might turn out not to be H<sub>2</sub>O.

(c) It is possible that we could discover that water isn't H<sub>2</sub>O.

- Now, the question is: How are we to understand such claims as this? (I'll focus on the last way of expressing the intuition.) On the one hand, they could just mean that it may turn out that these identities are not in fact true. This way of interpreting these claims raises no special problems for Kripke; for Kripke's point is only that *if they are true*, then they are necessarily true.

- However, these statements are also often used by individuals who want to say that *even if the identity claims are true*, we can still imagine discovering that they are false. This can only mean that though the identity claim is true in the actual world, there is another possible world in which we can discover that it (the very same proposition as is expressed by this sentence in the actual world) is false. But if Kripke is right, *this* is not possible. For the identity claim to be true and for this to be a genuine possibility, it must be that, contrary to our initial assumption, one or the other of the designators is *not* rigid.

- Since Kripke thinks they are rigid, and denies that if the identity claim is true then there is a possible world in which the claim is false, *he needs to explain away the seemingly contrary intuition*. He does so by suggesting that what we are really imagining when we make such claims is not a possible world in which the water is not H<sub>2</sub>O and we discover *this*, but, rather, *a possible world in which we discover that an epistemic counterpart of water (a substance that is not water but that possess all of the properties by means of which we normally identify water in the actual world) is not H<sub>2</sub>O* (or, alternatively, a possible world in which we discover that an epistemic counterpart of H<sub>2</sub>O is not water). But to imagine *this* is not to imagine discovering that *water* is not H<sub>2</sub>O. So Kripke's position apparently remains secure. (Does it?)

### 4. A provisional moral

- If we believe that an identity statement of the form [a=b] is true, but it's modal variant [□(a=b)] is false, then either (i) one of the expressions 'a' or 'b' fail to be rigid designators, or (ii) we are wrong that the statement [a=b] is true, or (iii) our belief that something can be an A (i.e., the type of thing picked out by 'a') without being a B (i.e., the type of thing picked out by 'b') is *false*. For, as we saw, if 'a' and 'b' *are* rigid designators, then the identity claim is true if and only if it is necessarily true.

- If it were true that something can be an A without being a B, it follows that A is not necessarily identical to B. Thus, it follows that the modally governed identity sentence [□(a=b)] is false. Given that 'a' and 'b' are rigid designators, it thereby follows that the identity claim [a=b] is false. (See §2 of this handout.)

- Which do we want to give up, the identity claim or the claim that something can be A without being B? We have reason to keep the identity claim, if we can successfully explain away our temptation to suppose that A might not have been B along the lines Kripke proposes. In the sorts of cases represented by our two examples of theoretical identity statements above, we can explain away (i.e., expose as illusory) our intuition that A might not have been B. Accordingly, we can with perfectly good conscience continue to believe in the theoretical identities.

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<sup>2</sup> It is very hard to characterize natural kinds, and philosophers of science, philosophers of language, and one of my former thesis students have agonized endlessly over the issue. Kripke's examples should make it clear, at least in outline, what he is talking about when speaks of *natural kinds* and *natural kind terms*.