1. Let us now return to the modal argument. Consider again the sentences:

(a) Aristotle was fond of dogs
(b) The last great philosopher of antiquity was fond of dogs

As we have seen there are possible worlds that (a) describes truly and (b) describes falsely, and vice versa. That is because when we use it to describe any possible situation, ‘Aristotle’ always denotes the same thing whereas different things satisfy the DD ‘The last great philosopher of antiquity’ at different possible worlds.

2. Kripke expresses this difference by saying that ‘Aristotle’ is a *rigid designator* and ‘The last great etc.’ is a *flexible designator* (NN 48). And his thesis is that ordinary proper names are rigid, whereas the definite descriptions that purport to give their meanings are flexible.

3. A good intuitive test for rigidity is to ask yourself whether you can truly substitute the expression for ‘X’ in the following schema:

(c) The thing that is in fact X might have not been X

If you can then the expression is flexible. ‘Aristotle’ does *not* fit truly into (c): the thing that is in fact Aristotle *could* not have failed to be Aristotle. On the other hand the thing that is in fact the last great philosopher of antiquity (i.e. Aristotle) *might* have not been the last great philosopher of antiquity—as would have happened if Aristotle had never gone into philosophy in the first place. All of this has a more familiar temporal analogue: we may define an expression as temporally rigid if it denotes the same thing at all times of evaluation. Thus e.g. ‘Aristotle’ is temporally rigid but ‘The PM’ is not temporally rigid, as can be seen if we apply a temporal analogue of the intuitive test: ‘The person who was once Aristotle was once not Aristotle’ is false; but ‘The person who is now the PM was once not’ is true.

4. Definite descriptions are typically flexible by the intuitive test, though some are rigid. ‘My favourite number’ is flexible for instance; whereas ‘The sum of 1 and 1’ is rigid. Dummett’s view from last time is essentially that rigidity is a matter of scope: definite descriptions that take wide scope in modal contexts are rigid. When applying the criterion to the evaluation of sentences at other possible worlds, the point is that the description theorist should take (f) rather than (e) to be the correct interpretation of (d):

(d) At w, Aristotle was fond of dogs
(e) At w, the last great ph. of a. was fond of dogs
(f) The last great ph. of a. is such that at w, he was fond of dogs
If w is a world where Aristotle never went into philosophy, (d) is true, (e) is false and (f) is true. Thus the phenomenon of rigidity casts no real doubt on the description theory of names.

5. On the other hand it does seem to support surprising conclusions about the modal status of identity statements. In particular, suppose that ‘a’ and ‘b’ are rigid designators and that ‘a = b’ is true. Then since ‘a’ denotes the same object at every possible world as it does at the actual world, it denotes the same object at every possible world as ‘b’ does at the actual world. But since ‘b’ denotes the same object at every possible world as it does at the actual world, ‘a’ and ‘b’ must therefore be denoting the same object as one another at every possible world, and so ‘a = b’ is a necessary truth (NN 102). This yields examples of necessary a posteriori truth: e.g. it is necessary and a posteriori that Hesperus = Phosphorus.

6. It is important to distinguish this metalinguistic claim from the claim that any objects that are identical are necessarily identical. That claim follows from (g) the necessity of self-identity and (h) Leibniz’s Law:

\[
\begin{align*}
(g) \forall x \Box (x = x) \\
(h) \forall x \forall y (x = y \rightarrow \Box (x = x) \leftrightarrow \Box (y = x)) \\
(i) \forall x \forall y (x = y \rightarrow \Box (x = y)) \text{ from (g), (h)}
\end{align*}
\]

Note that (i) does not permit of arbitrary substitutions: we cannot infer from it e.g. that if Benjamin Franklin = The inventor of bifocals then necessarily BF = the inventor of bfs. We can only substitute terms that—like variables themselves—have the same reference in modal contexts as in extra-modal ones i.e. rigid designators. (Think further about how much of what I have said also applies to distinctness.)

7. And yet these identities seem contingent. It seems that we can imagine ‘that Hesperus and Phosphorus were different’: that the brightest celestial body visible in the evening, and the brightest celestial body visible in the morning, should have turned out to be different planets. Kripke argues that this is a case of modal illusion.

8. What you are really imagining, he says, is a situation in which the feature by which we pick out H (its appearance in the evening) does not apply to P, or vice versa. But these features by which we pick out H and P are contingent features of those phenomena: so what we are really imagining are not situations in which the identifications are false but situations in which what is really Hesperus happens not to be the brightest object visible in the evening (say).