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| 1879. Frege (*Begriffsschrift*) | 1. The meanings of names and descriptions (N&D) are what they contribute to the meanings of sentences containing them.  
2. N&D contribute their referents to sentence meanings. | 1. *The Basic Worry*: If reference is all there is to meaning, then two STs with the same reference have the same meaning, and an ST without a reference has no meaning. This has two specific forms for Frege:  
2. *Informativity of Identicals*: ‘Cicero = Tully’ is informative.  
3. *Empty Names*: ‘Santa Claus’ contributes something to the sentences in which it occurs. |
| 1892. Frege (“On Sense and Reference”) | 1. The meanings of N&D are what they contribute to the meanings of sentences containing them.  
2. Word and sentence meaning has two levels: reference and sense.  
3. Reference is the thing in the world picked out by the expression.  
4. Sense is the *mode of presentation* with which the reference is given.  
5. This solves the problems, since sense can account for the informativity of identicals and empty names.  
6. Frege solves the problem of substitutivity by contending that in indirect discourse, a sentence refers to what is its sense in direct discourse. | 1. *Substitutivity*: We cannot substitute coreferring sentences in indirect discourse and retain the overall truth value. (E.g., “Jane believes that Cicero was a Roman orator.”)  
2. *Bivalence*: How is it that sentences can have a truth value if they contain terms that don’t refer? Sense doesn’t seem to help here.  
3. *Negative Existentials*: How can we sensibly say something like, “The Easter Bunny does not exist.” |
| 1905. Russell (“On Denoting”) | 1. N&D only appear to contribute something to sentences in which they appear. In fact, they do not have a stand-alone meaning—they only have meaning in the context of sentences.  
2. The surface structure of these sentences is misleading; their logical form is that of a general claim about domains of discourse and not about particular items.  
3. This solves all of Frege’s problems plus Bivalence and Negative Existentials. | 1. What of reference? Is there no such thing? Do we never tie the language to the world? |
| 1918. Russell (“The Philosophy of Logical Atomism”) | 1. N&D are really disguised descriptions that are analyzed away.  
2. There are referring terms—logically proper names, e.g., ‘this’ and ‘that’ when used to talk about sense data. These are directly referential and are not descriptive. | 1. But this story about names, in particular, gets the data wrong.  
2. Names work by getting us to their bearers descriptively, which means that they function semantically as descriptions.  
3. But we can refer with a name even if we lack information sufficient to individuate an item.  
4. Further, we can refer even if the determinant information takes us to the wrong place.  
5. This also supports certain epistemic and metaphysical relationships with the referents of names that are in error. |
| 1970. Kripke (Naming and Necessity) | 1. Names are rigid designators, referring in all possible worlds to the items they refer to in the actual world. They only have reference, not sense. (The Nietzschean part)  
2. The specific principles underlying the Description Theory are false.  
3. We can’t know a priori that the bearers of certain names have certain properties, and it is false to say that if they have these properties, they have them necessarily.  
4. This account also extends to natural kind terms. |