# Sameness and Sortals

A First Ingredient to a Recipe for a Resolution

# Sortal Identity

- The approach I shall commend to questions of identity and individuation will be a sortalist one, claiming among other things that the identity of *x* and *y* is to be determined by reference to some fundamental kind *f* that *x* and *y* each exemplify. This approach is prefigured in Aristotle's question, definitive of his category of substance, *ti esti* or what is it? Contrast the question, definitive of his category of quality, *what is it like*?' —Wiggins (2012,1)

# Some Bedrock

- For all $x$, $x = x$.
  - The *reflexivity* of identity.
- If $x = y$, then $x$ is $\phi$ *iff* $y$ is $\phi$
  - This is Leibniz's Law
    - Or, rather, this is half of LL, viz. the Indiscernibility of Identicals.
      - The other half, the Identity of Indiscernibles, invites problems: if $x$ is $\phi$ *iff* $y$ is $\phi$, then $x = y$
        - As a historical note, Leibniz held: ($x = y$) *iff* ($x$ is $\phi$ *iff* $y$ is $\phi$)

# Some Evident Consequences

- If $x = y$, and $y = z$, then $x = z$.
    - This is the *transitivity* of identity.
        - Briefly, if $x = y$, then $x$ has every property $y$ has; $y$, we have just learnt, has the property of being identical with $z$; so, $x$ too is identical with $z$.
- If $x = y$, then $y = x$.
    - This is the *symmetry* of identity.
        - Briefly, if $x = y$, then $y$ has every property $x$ has; $x$ has the property of being identical with $x$; so, $y$ too has the property of being identical with $x$.

# But wait, there's more. . .

- If $(x = y)$, then $\Box(x = y)$
  - This is the *necessity* of identity.
    - Briefly, if *x* = *y*, then *y* has every property *x* has; *x* has the property of being necessarily identical with *x*; so, *y* too has the property of being necessarily identical with *x*. So, if $(x = y)$, then $\Box(x = y)$.
    - More formally:

1. $(x)(y)[(x = y) \rightarrow (\phi x \rightarrow \phi y)]$
2. $(x)\Box(x = x)$
3. $(x)(y)(x = y) \rightarrow [\Box(x = x) \rightarrow \Box(x = y)]$
4. $(x)(y)[(x = y) \rightarrow \Box(x = y)]$

# More Controversially

- If $x = y$, then $x$ is determinately $= y$.
  - This is the *absoluteness* or *determinateness* of identity.
    - Briefly, if $x = y$, then $y$ has every property $x$ has; $x$ has the property of being determinately identical with $x$; so, $y$ too has the property of being determinately identical with $x$. So, if ($x = y$), then ($x$ is determinately $= y$)
      - One thought here: if you tell me that $x$ is fuzzy or a vague object, but then also tell me that ($x = y$), then it will follow that $y$ too is a fuzzy or vague object.
        - It will not follow that their identity is vague; on the contrary, they will be determinately identical vague objects—if there are vague objects.

# More Controversially Still

- If x = y, then x is permanently = y.
  - This is the *permanence* of identity.
    - Briefly, if $x = y$, then $y$ has every property $x$ has; $x$ has the property of being permanently identical with $x$; so, $y$ too has the property of being permanently identical with $x$. So, if ($x = y$) then ($x$ is permanently = $y$)
    - Note in this connection that we seem to have the result that it cannot be the case that ($x = y$) at $t_1$ but that ($x \neq y$) at $t_2$.
      - But wait, you may say, is it not the case that at $t_1$ (BO = President of the US), but at some later time $t_2$ (BO ≠ President of the US)?
        - N.b. The permanence of identity does *not* entail or imply that nothing can change; it only says that if something changes, it remains the case that it is true of it after it has changed that it was a way it is no more.
          - So, if $x$ is $\phi$ at $t_1$ but not-$\phi$ at $t_2$, it remains true at $t_2$ that $x$ was $\phi$ at $t_1$.
            - In general, although things are necessarily self-identical, it does not follow that for all $\phi$ and for all $x$, if $x$ is $\phi$, then x is necessarily $\phi$.

# Two Observations

- Whenever we say *x* is the same as *y*, we evidently mean that *x* is the same $\phi$ as *y*.
  - This is the *sortal dependence* of identity.
- From this we cannot infer, however, that possibly *x* is the same $\phi$ as *y*, even though *x* is not the same $\psi$ as *y*.
  - On the contrary, our commitment to the necessity of identity seems inconsistent with this claim, which is the *relativity* of identity.
    - In short, the sortal dependence of identity does not entail or imply the relativity of identity.
      - On the contrary, it seems to imply just the opposite.

# One Further Implication

- If identity is necessary and absolute, then it also seems that the question of whether ($x = y$) should not be contingent on whether any $z$ is or is not on the horizon as a competitor to $y$.
    - Further, if identity is permanent as well, then, taken diachronically, the question of whether $x$ at $t_1$ is identical to $y$ at $t_2$ should not be contingent upon, or otherwise conditioned by, the appearance of $z$ as a potential competitor to $y$.
- This is what some (e.g. Noonan) have called the *only x and y principle*.
    - We will refer to it, less prosaically, the *indifference* of identity

# What We Need

- An account of predication.
- An account of universals and of properties generally.
- An account of particulars, both synchronic and diachronic.
- An account of essence and modality.
- An account of time.
- A theory of categories.
    - Finally, as a retrospective sort of stock-taking, an account of realism and anti-realism about all the items on this list.