The Identity of Indiscernibles and the Principle of No co-location

Black's thought experiment of a symmetrical universe containing only two perfectly similar spheres seems to lend support to the thesis that the two intuitively strong principles of no co-location (PNC) and of the Identity of Indiscernibles (IDIN) are incompatible on the assumption that the relational view of space (RVS) is true. In this paper we argue that by considering a slightly different version of the thought experiment, the opposite conclusion can be drawn: (PNC) and (IDIN) are compatible no matter whether we assume or reject (RVS).

(PNC) No two material bodies of the same kind can occupy the same place at the same time.

(IDIN) For every *x* and *y*, if for every property P, *x* has P if and only if *y* has P, then *x* = *y*.

(RVS) Spatial relations are relations between material bodies, not between points of space.

Black's perfectly symmetrical universe containing only two perfectly similar spheres is an alleged counterexample to (IDIN). In Black's world the spheres are (numerically) *distinct* because they are spatially separated from each other, and yet *indiscernible* because they are similar under any respect. Black exploits (PNC) and (RVS) to make his point (and both assumptions are fine with his verificationist opponent). From (PNC) it follows that if *x* is spatially separated from *y*, *x* is distinct form *y*. However, it seems that if *x* is spatially separated from *y*, then there is at least one spatial relation in which *x* enters but *y* does not, and thus there is at least one (relational) property that *x* has and *y* lacks. If this is true, *x* and *y* are not only distinct, but also discernible, and Black's thought experiment does not provide us with a counterexample to (IDIN). But this objection can be resisted if we endorse (RVS), which entails that in a perfectly symmetric universe, two perfectly similar but spatially separated material bodies *x* and *y* share all their spatial relations. Therefore, although (PNC) and (IDIN) are both intuitively strong, they cannot both be retained if we endorse (RVS).

Consider now a universe in which *x* is a material sphere superposed to a perfectly similar material sphere *y*. In such a universe, if (PNC) holds, then *x* is identical to *y*, and (IDIN) is safe (i.e. there is no counterexample to it). However, if we dismiss (PNC), then (IDIN) fails *even if we reject* (RVS). Given that the spheres occupy the same place, no appeal to differences in spatial relations can be exploited to discern them. And the two superposed spheres bear the same spatial relation to any other distinct spatial point, thus they are not discernible even if the universe that they inhabit is symmetric. Of course, (PNC) is the main support to Black's point that the spheres are distinct. But in order to argue that they are *not* discernible, Black has to endorse (RVS) and confine his example to perfectly symmetrical universes. If we consider the case in which *x* is superposed on *y*, (IDIN) and (PNC) turn out to be compatible even if we reject (RVS).