Linguistic reflexes of ontological dependence relations

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There is a recent body of philosophical work, building on a long tradition in metaphysics, whose aim it is to explore and define relations of ontological priority and dependence between and among entities (Correia 2005, 2008; Fine 1995; Koslicki 2012; Lowe 1998, 2009, et alia). Among the candidates for entities related in this way are holes-hosts, tropes (particularized properties)-instantiating individuals, setsmembers, Socrates' life-Socrates, universals-particulars, events-participants and smiles-mouths. This research investigates how dependence relations of this sort affect the expressions we use to talk about dependent entities. It has been observed in the linguistic literature for some time that expressions such as hole and flaw, for example, behave differently from nouns denoting "ordinary" objects, such as coat, in certain syntactic environments (cf. Chomsky 1981; Higgenbotham 1985; Hornstein, Rosen and Uriagereka 1994; Kimball 1971, 1973; McNally 1998; Milsark 1974; Shafer 1995). For instance, they may appear as the postverbal NP in the there-sentence but not as the subjects of the "related" locative copular sentence (1-2). Sentence (2) becomes acceptable if coat is substituted for hole, e.g. (3), or if the description is definite, e.g. (4). This research relates the facts in (1-4) to the dependence of the entities in question.

There is a hole in my closet. (there-sentence)
 #A hole is in my closet. (locative copular sentence—indefinite)
 A coat is in my closet. (NP picking out "ordinary" entity)
 The hole is in my closet. (locative copular sentence—definite)

A locative prepositional phrase is used to realize the relation between a dependent entity and the prior one. To specify this relation, however, the dependent entity must be part of the previous discourse (cf. 2, 7, 8). Examples (2) and (7) show that neither definite nor indefinite descriptions of the dependent entity are possible subjects of locative copular sentences when the dependent entity (and therefore the dependency relation) is not already given. Talk of the ontologically prior entity is not enough to make the dependent one, or their relation, inferable in context: the dependence relation is asymmetrical. As a consequence, indefinite expressions of this type are introduced using two noncanonical structures, the existential *there*-sentence and locative inversion (1, 6). These constructions differ from the locative copular sentence precisely in the way the dependent entity is presented *vis-à-vis* the conceptually prior entity. In the noncanonical structures the expression corresponding to the dependent entity occupies a postverbal, non-subject position lower in the clause, where predicates may appear.

5. #In my closet is the hole. (locative inversion)
6. In my closet is a hole. (locative inversion)
7. [What is in your pants?] #The hole is in my pants. (hole-NP not given)
8. [Where is the hole?] The hole is in my pants. (hole-NP given)

Further, a dependent entity cannot be located in the way ordinary entities can—it may only be *related* to the ontologically prior entity on which it depends (5–8). Two pieces of evidence: <u>First</u>, expressions corresponding to dependent entities are infelicitous with locative modifiers, a characteristic they share with the so-called individual-level (IL) predicates (9–10 and cf. Carlson 1977; Chierchia 1995; Kratzer 1995, *et alia*). Dependence relations of this sort share with IL properties the characteristic of not changing on the basis of the location in time or space of the entity. <u>Second</u>, the dependence relation that holds between these entities is *intransitive*, a property that

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- 9. #John knows French in the car. (IL predicate/locative modifier) 'When John is in the car, he knows French'
- 10. #The hole is in the wall in the car. (dependent NP/locative modifier) 'When the hole is in the car, it is in the wall' /OK on relative clause interpretation
- 11. There is a ball in the box. (transitive relation/ordinary entity)
 The box is in the closet.
- ⊨The ball is in the closet.

 There is a bala in the buglet.
- 12. There is a hole in the bucket. (intransitive relation/dependent entity)
 The bucket is in the closet.

 ⊭There is a hole in the closet.

Finally, consider the membership of this class. Notably, among the expressions that participate in the copular–existential alternation are not only those picking out metaphysically difficult entities, such as *hole* and *flaw*, but also *fire*, and *knot* (17–18). Furthermore, abstract entities, such as the color term *red* (13), property nominalizations such as *wisdom* (14), event nominals, such as *riot* (15) and even mass quantities, such as *salt* (19–20), share this distribution—that is, expressions corresponding to the full range of ontologically dependent entities mentioned above. It is clear, however, that more detailed criteria should be developed to distinguish among these various classes. Abstract objects are dependent on their instantiations in a way that is different from holes–hosts and smiles–mouths, and have a different distribution even outside these constructions (cf. Moltmann 2013). Event nominals, such as *riot*, differ in being transitive (21).

- 13. #Red is on the wall. There is red on the wall. (color)
- 14. #Wisdom is in what you say. There is wisdom in what you say. (property nominalization)
- 15. #A riot is in the square. There is a riot in the square. (event)
- 16. Rioters are in the square. (participant)
- 17. #A fire is on Mass Ave. There is a fire on Mass Ave.
- 18. #A knot is in the rope. There is a knot in the rope.
- 19. #Salt is in the soup. There is salt in the soup. (mass term)
- 20. The salt is in the cupboard.
- 21. There is a riot in the square. (transitive relation)

The square is in Ukraine.

⊨There is a riot in Ukraine.

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