Lessons from Russell

Philipp Keller

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The problem of relations

Three assumptions:

A1 There are symmetrical relations, e.g. expressed by "x is 2 metres apart from y": $xSy \leftrightarrow ySx$

A2 There are non-symmetrical relations, e.g. expressed by "x loves y": $xLy \not\leftrightarrow yLx$

A3 Some non-symmetrical relations L may have symmetric completions: $\exists x, y(xLy \wedge yLx)$ (e.g.: some love is reciprocated).

Three desiderata:

D1 For non-symmetrical relations L, there is a meaningful notion of converse (expressed by "$\bar{L}$") such that $\bar{L}$ is distinct from L.

D2 Identity 1: for non-symmetrical relations L, $aLb = b\bar{L}a$

D3 Identity 2: for symmetrical relations S, $aSb = bSa$

Problem: What account of relational facts, respecting the assumptions, satisfies all three desiderata?

Monadism

Leibniz, Lotze: Relations reduce to monadic properties of their relata ($aRb = Fa \wedge Gb$).

Russell 1903: Monadism does not respect **A2**, for we need to add $FR'G$ and cannot give a monadistic account of it, on pain of regress.

Possible twist: relational properties. But as Hochberg 1988 argues, relational properties are posterior, not prior to relations.

Another possible twist: Russell's regress is harmless, because all relations are internal. But there are some external relations (e.g. causation) and even if there weren't, internal relations also give rise to the regress.

Monism

Spinoza, Bradley: Relations reduce to monadic properties of wholes having only their relata as parts ($aRb = F(ab)$).

Russell 1903: Monism does not respect **A2**, for it does not allow us to distinguish (ab) from (ba).

Directionalism

Russell 1903, 1919, Hochberg 1981, Gaskin/Hill 2012: Relations have a sense, or direction.

There are different ways directionalist can account for **A1** and **A3**, and the view respects **D1** and may be made to respect **D3**. But it does not satisfy **D2**.

Ramsey 1925, Hochberg 1999 **?**: 159 : Because **D2** is not satisfied, this forces upon us an arbitrary choice.

Fine 2000: On a "certain view of how relations are implicated in states or facts", p3 Uniqueness: no complex is the completion of two distinct relations (p5) **D2** is incompatible with **D1**.

Intermediate conclusion: Giving up on converses

Russell 1913: Relations are "neutral as regards sense". p88

Williamson 1985, Fine 2000: There is no meaningful notion of converse. We give up on **D1**, and therefore the need to satisfy **D2**.

But how are we to account for **A2**?

Positionalism

Williamson 1985: in aLb, a fills the first argument position of L and b the second, while in bLa it's the other way round ($aLb = L(a, b, \{\langle a, \alpha_L\rangle, \langle b, \beta_L\rangle\})$.

Fine 2000: This does not "allow for a meaningful notion of converse" (because positionalist relations are not capable of sharing argument places?)[1]

Hochberg 1981, 1999, 2000, 2001: positionalism does not provide an analysis of order. **?**, **?**: 153 (COPY), **?**: 40-1 (GRAZER), **?**: 175 (FILE)

Hochberg 1999: positionalism cannot account for similarity that is merely "a matter of order".

Hochberg 1999: this "recognizes positions (holes, places), as purported entities" (p. 175).

?: 153, **?**: 175

Fine 2000: positionalism "requires us to accept argument-places or positions as entities in their own right" (p. 16).

Grossman 1992, Fine 2000: positionalism does not respect **D3**, because some symmetric relations are also neutral.

How plausible is **D3**? Armstrong 1997:90-1, Fine Hochberg is happy to bite this bullet (1999: 156-7)

Anti-Positionalism

Fine 2000: in aLb, a and b fill the argument positions in the same way as in some exemplar sLt, while in bLa they do not.

MacBride 2007: anti-positionalism has all the problems of resemblance nominalism.

Hochberg 2000, Dorr 2004: we still need to make order-comparisons between completions of different relations.

A Lesson from Russell?

Russell 1913: in aLb, there are relations "which constitute 'position' in the complex" (p. 88): $aLb = \exists x((alpha_L(a, x) \wedge \beta_L(b, x))$. These are neutral, but cross-categorical ("heterogeneous"), i.e. neither symmetric nor asymmetric, as no "logically possible complex results from interchanging" their terms.

This satisfies **D1**: Given aLb with non-symmetrical L, $a\bar{L}b := \exists x(\alpha_L(b, x) \wedge \beta_L(a, x))$.

This satisfies **D2**: $b\bar{L}a = \exists x(\alpha_L(a, x) \wedge \beta_L(b, x)) = aLb$.

Hochberg 2001, p. 197: it does not satisfy **D3**: $aSb = \exists x(\alpha_S(a, x) \wedge \beta_S(b, x)) \neq \exists x(\alpha_S(b, x) \wedge \beta_S(a, x)) = bSa$.

Could Russell give a monistic analysis of symmetrical relations: $aSb = S(ab)$? No, because there is a difference between a and b playing tennis with c and d on the one, and a and c playing tennis with b and d on the other hand.

[1] It is also not entirely clear to me *how* what exactly this means. On positionalism, Fine says: "Nor does the present [positionalist] notion of exemplification permit a meaningful notion of converse. We may indeed ask whether, for given argument-places α, β, α', and β', the relation R' holds under the assignment of a to α' and b to β' just whenever R holds under the assignment of a to α and b to β'. But this merely tells us whether the relations are coextensive under the given alignment of argument-places. To obtain the notion of converse, we also need to assume that $\alpha' = \beta$ and $\beta' = \alpha$, But I doubt that there is any reasonable basis, under positionalism, for identifying an argument-place of one relation with an argument-place of another." (p. 12). **?**: 34 says this is an extra assumption.

But even if this difference in treatment of symmetrical and non-symmetrical relations can be (independently, non ad-hoc-ly) justified, there will still be *two* completions in the case of symmetrical completions of non-symmetric relations (**A3**). If a and b love each other: $aLb = \exists x(\alpha_L(a,x) \wedge \beta_L(b,x)) \neq \exists x(\alpha_L(b,x) \wedge \beta_L(a,x)) = bLa$.

Hochberg's three modifications: (i) make the positional relations topic-neutral, (ii) include the relational universal, (iii) include the relational fact's logical form: $aLb = \exists x(\alpha(a,x) \wedge \beta(b,x) \wedge att(R,x) \wedge inf(\Psi,x))$. (i) means that the positional relations are irreducibly ordinal, (ii), according to Hochberg himself and Macbride, entail that **D2** is violated (though I do not see what definition of converse would give us this result).

Questions:

1. Is it plausible that we do not have to explain the non-symmetry of heterogeneous relations? It is true that there is no differential applicability, but there are still - converses - different relational properties
2. Why do Hochberg and MacBride think that Hochberg's account satisfies *D1 but not D2*?
3. what about the unordered complex - in virtue of what does it stand in R1 to a and R2 to b rather than standing in R1 to b and in R2 to a?
   my differences to Hochberg/MacBride's reconstruction: no neutral relation, no unordered complex.
4.
5.

?: 219-20: it's a manner of individuating things by relations **?**: 439 **?**: 73

Order without asymmetric relations: **?**: 200, **?**: 157-9, **?**: 44-7 (GRAZER)

How can you not have a 'meaningful notion of a converse'? You can define it in terms of order, rather than direction. So it is a general disadvantage of neutralism that it does not satisfy **D1**.

modification of Russell: keep the relation-specific positional relations, but get rid of the unordered complex

PK Two modifications of Hochberg's account:

1. relation-specific positional relations
2.
3.
4.
5.

macbride's two criticism of Hochberg's argument that there may be comparisons of ordering: - is there real similarity? Is 7 wrt '7 >5' more similar to A wrt 'A loves Cleopatra' than it is to Cleopatra wrt the latter fact - if there were, there would also be comparisons between the first arguments of binary relations and all the argumetns of 5-ary relations?

The first depends on the fact that the comparison is absolute. But obviously we do make relative comparisons, eg we distinguish between worlds where temporal succession and causality go in the same direction and worlds where they go in different directions

All the omega-sequences are similar in respect of order.

Hochberg: in the case of symmetric relations, the positionalist can just deny that there is a converse – if you make one assignment you have one way of talking about the fact, in making the other you are talking about it in another way.

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