

MUNDY

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Properties seminar

Brent Mundy's "second-order" version of measurement theory:

- Platonism about properties. (There exist properties—even uninstantiated ones.)
- Posit higher-order relations \geq and $*$ over properties that are analogous to the relations \succeq and C .
- Prove appropriate representation and uniqueness theorems

Differences from standard measurement theory:

- Can assume that $*(X, Y)$ is unique, and that \geq is antisymmetric
- The standard theory needs different C and \succeq relations for different quantities (mass, charge, etc.) Mundy can use the same relations \geq and $*$ for each quantity (\geq is a partial order). "Ray": the set of properties Y such that either $X \geq Y$ or $Y \geq X$, for some given X . A ray is basically a particular quantity, such as charge or mass.
- Given any function measuring properties, we can define a function that measures mass values of *objects* (rather than properties): the latter function assigns to each object the value assigned to the mass property that that object instantiates. Note: this works only given the assumption that no object has two mass properties. (More generally, the assumption is that nothing instantiates more than one property on a ray.)