“A logician is that kind of mathematician who thinks that a formula is a mathematical object” my *Doktorvater* once said. Mathematical objects can be described in formal languages, and the descriptions can be studied as mathematical objects in their own right. Interpretations between them can give rise to relative consistency results. There will be a category of descriptions (theories) and interpretations between them. It turns out that the notion of interpretation-between-theories is much more fine-grained than people used to assume (there is more than one notion of interpretation) and there is quite a lot of recent work on this set of ideas that has not been systematised. Collating it will be a useful scholarly discipline.

Thinking about what kind of interpretability holds between two mathematical theories (the two theories of partial order and of strict partial order are in some (pretty obvious) sense the same; Boolean rings and boolean algebras are demonstrably the same, and that’s slightly less banal (and less obvious) tho’ unproblematic. But what about the equivalence of bit strings and natural numbers? Waves and particles??—that’s another thing altogether. Thinking about these equivalences will put your background mathematical knowledge to good use, and challenge your understanding of it.

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