

Should the *explicans* be simpler than the *explicandum*?

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Abstract. It seems indisputable that from the foundational point of view, in the order of learning or constructing a theory, the *definiens* should be simpler than the *definiendum*. But does this mean that in the order of explanation we cannot use something more complicated to explain a simpler thing? Extremely complicated physiological, neural, physical, optical, and other, theories can be used to explain something so simple as seeing. (By the way, seeing is very difficult to define in terms of something simpler.) In the world of mathematics, one of the biggest successes of category theory is provided by the explanation of the notions of ordered pair and product through the notion of adjoint functor, a product bifunctor being the right adjoint to a diagonal functor. This explanation, which certainly cannot serve as a definition, explains something quite simple and elementary with a rather complicated apparatus, which presupposes the notions of product and function. This explanation is from the foundational point of view also unacceptable as a definition because it is circular. This explanation however, which also serves to explain proof-theoretically the meaning of conjunction, the simplest of all connectives, might serve as a prototype of something to be expected in the all-encompassing self-referential intensional mathematics of the future as forecast by Goedel.