Comparing operadic theories of n-categories

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We give a framework for comparing on the one hand theories of n-categories that are weakly enriched operadically, and on the other hand theories given using a globular operad. Examples of the former are the definition by Trimble and variants (May/Cheng/Gurski) and examples of the latter are the definition by Batanin and variants (Leinster). We will show how to take a theory of n-categories of the former kind and produce a globular operad whose algebras are the n-categories we started with. Our main aim is to show how the globular operad associated with Trimble's topological definition in this way, is related to the globular operad used by Batanin to define fundamental n-groupoids of spaces. This has the potential to provide an easier method for proving Batanin's Homotopy Hypothesis than the partial proofs currently in the literature; it also has the potential to provide a useful class of semi-strict n-categories.