A Mechanically Assisted Examination of Begging the Question in Anselm's Ontological Argument

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I assume familiarity with the Ontological Argument for the existence of God from Anselm's *Proslogion* Chapter II. Many authors have examined the Argument; in recent years, most begin by rendering it in modern logic, employing varying degrees of formality. Eder and Ramharter [1] provide a thorough discussion, formulating the argument in several different ways using first-order, higher-order, and modal logic. My focus is on renditions in classical first- and higher-order logic, represented completely formally, and explored with the aid of a mechanized verification system. These tools from computer science are generally used for analysis of software or hardware designs; they comprise a specification language, which is a rich (usually higher-order) logic, and a collection of powerful deductive engines (e.g., satisfiability solvers for combinations of theories, model checkers, and automated and interactive theorem provers).

Mechanized analysis confirms the conclusions of most earlier commentators: the Argument is valid. Attention therefore focuses on the premises and their interpretation. One line of criticism is that the Argument may "beg the question" by essentially assuming what it sets out to prove. This is the charge that I examine here.

I begin by saying that a premise *strictly* begs the question if it is equivalent to the conclusion, given the other premises. I show that one rendition of the Argument is vulnerable to this charge. This rendition employs a definite description; in its absence, the premises can be simplified and no longer beg the question. However, they are now so austere that no properties are required of the "greater than" relation; if a modest form of connectedness is required, then one premise again begs the question. I say that a premise *weakly* begs the question if it does so when the other premises are lightly augmented.

I next consider a variant premise that is neither strictly nor weakly question begging; I show that it provides *exactly* what is required to discharge a key step in the formal proof and so I say that it *indirectly* begs the question. I then consider formulations that use higher-order logic. Here, the formal proofs are longer and more involved but I show how they can be structured in a way that exposes indirect question begging.

Begging the question may not be a fatal defect, but it deserves discussion. The techniques described here reduce discovery of question begging to calculation, so the discussion can build on a firm foundation.
    Full version: http://www.csl.sri.com/users/rushby/abstracts/ontargbegs17

Bibliography

[1] Eder, Günther and Ramharter, Esther, "Formal reconstructions of St. Anselm's Ontological Argument," Synthese, 192(9):2795-2825, 2015.