Analyticity in Formal Systems
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Recently, Timothy Williamson (among others) proposed the following argument template against the claim that a given sentence, s, is analytic:

P1: If s is analytic, then whoever understands s assents to s.
P2: Some people understand s but don't assent to s.
∴ C: s isn’t analytic.

I argue that Williamson’s version of this argument with s a sentence of a formal system (such as FOL or set theory) suffers from an ambiguity.

Saying that person A assents to a sentence s of a formal system F is ambiguous between saying that A assents to:

(i) “s (and F) correctly apply to d,” for some domain d,
(ii) “F is a consistent or ‘appropriate’ system,”
(iii) “s is ‘part of’ F.”

First, I claim that “assent” in P2 should be understood as in either (i) or (ii), and not (iii). I argue that Graham Priest—Williamson’s examples for P2 with s stating Modus Ponens—doesn’t assent to FOL correctly applying to natural language, but assents to s being “part of” FOL. I consider other possible examples in support of P2 (viz. Edward Nelson and Solomon Feferman) where the proper interpretation of “assent” in P2 is as in (ii).

Second, I argue that “assents” in P1 should be understood (roughly) as in (iii). For this, I propose a conception of analyticity for sentences of formal systems which resembles Carnap’s and according to which s of F is analytic just in case understanding s requires believing that s is generally thought to be part of F within a certain practice or community. I defend this account by looking at specific examples in set theory and by drawing a parallel with a (plausible) account of understanding words due to Putnam, according to which understanding words in natural language requires knowing certain associated stereotypes or "core facts."