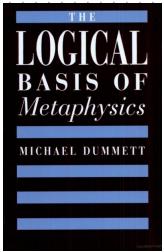


WHAT CAN WE MEAN?

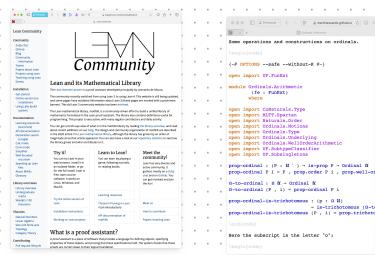
GREG RESTALL

Archie Day · Winter 2024

Michael Dummett:



Constructive Type Theory
& Proof Assistants:



- A proof from P to C is a function generating a ground for C from grounds for P .
- A proof of $\neg A$ is a function generating a ground for \perp (it has none!) from grounds for A .
- There is (in general) no proof from $\neg\neg A$ to A .

- Mathematicians are learning to think this way.

- A practice of constructive reasoning can be seen to fit various norms for assertion.

[Belief; Knowledge; license to assert, etc...] — possessing a ground is a licence to assert... .

- But is this the only assertoric practice?

everything else there is.

SOCRATES: Now, this point, I take it, is most necessary to assert of the good: that everything that has any notion of it hunts for it and desires to get hold of it and secure it for its very own, caring nothing for anything else except for what is connected with the acquisition of some good.

PROTARCHUS: There is no way of denying this.

SOCRATES: So let us put the life of pleasure and the life of knowledge on trial, and reach some verdict by looking at them separately.

PROTARCHUS: In what way do you mean? Philebus 20d.

[Imagine PROTARCHUS continues: Yes, Socrates, I concede $\neg\neg A$, but I fail to see how you have given a ground for A .!]

- QUESTION: Is there just one privileged set of assertoric norms, defining one privileged set of propositions? Or...?