

# Correction to: Formal and Natural Proof: A Phenomenological Approach



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## Correction to:

**Chapter 14** in: S. Centrone et al. (eds.), *Reflections on the Foundations of Mathematics*, Synthese Library 407, [https://doi.org/10.1007/978-3-030-15655-8\\_14](https://doi.org/10.1007/978-3-030-15655-8_14)

The abstract of this chapter was initially published with error. The chapter has been updated with the corrected abstract as given below.

It is frequently claimed (see e.g. Rav, A critique of a formalist-mechanist version of the justification of arguments in mathematicians' proof practices. *Philosophia Mathematica* (III) 15:291–320, 2007) that the formalization of a mathematical proof requires a quality of understanding that subsumes all acts necessary for checking the proof and that, consequently, automatic proof checking cannot lead to an epistemic gain about a proof. We present a project developing what is sometimes called a 'fortified formalism' and argue, taking a phenomenological look at proof understanding, that proofs can be (and often are) given in a way that allows a formalization sufficient for producing an automatically checkable write-up, but does not subsume checking.

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The updated version of this chapter can be found at  
[https://doi.org/10.1007/978-3-030-15655-8\\_14](https://doi.org/10.1007/978-3-030-15655-8_14)

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