

- PIETRO BROCCI, *Disquotation, minimality and proof-theoretic power.*

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The popularization of the deflationist doctrine on truth has brought new attention to disquotational principles, i.e. $T(A) \leftrightarrow A$. The reason for this is that, according to deflationists, truth is merely a logico-mathematical device and it should be logically represented by principles that express its function. Since disquotational principles are generally successful in doing so, disquotational theories of truth are being investigated now more than ever.

The aim of the paper is to assess the status and logical force of disquotational principles in the framework of axiomatic theories of truth, in particular for theories formulated in classical logic. First, we survey the theories formulated by Halbach [3], Schindler [5] and Picollo [4]. Picollo's theory achieves proof-theoretic strength by changing the base theory, making it not comparable with the others. Schindler's proposal achieves the strongest proof-theoretic power but, we argue, its axioms are not justified independently of its strength. Thus, Halbach's theory, PUTB, is still the best candidate for an axiomatization of disquotational principles in classical logic, being well-motivated and proof-theoretically as strong as the theory that states the existence of fixed-points for arbitrary positive inductive definitions, \widehat{ID}_1 .

In the second part of the paper, we show that PUTB is capable of capturing even more mathematical reasoning. To do so, we extend it by means a minimality principle in the style of Burgess' theory in [1]. We prove that this new theory, $PUTB_\mu$, is proof-theoretically as strong as ID_1 , i.e. the theory that states the existence of *minimal* fixed-points for arbitrary positive inductive definitions. This makes $PUTB_\mu$ as strong as Burgess' theory, KFB. Fujimoto in [2] argues that proof-theoretic equivalence results are not enough to show that two theories capture the same concept of truth, for this purpose they introduce the notion of relative truth definability. Therefore, we conclude by proving that KFB is relatively truth definable in $PUTB_\mu$.

[1] Burgess, John P. "Friedman and the axiomatization of Kripke's theory of truth." *Conference in honour of the 60th birthday of Harvey Friedman at the Ohio State University*. 2009.

[2] Fujimoto, Kentaro. "Relative truth definability of axiomatic truth theories." *Bulletin of symbolic logic* 16.3 (2010): 305-344.

[3] Halbach, Volker. "Reducing compositional to disquotational truth." *The Review of Symbolic Logic* 2.4 (2009): 786-798.

[4] Picollo, Lavinia. "Reference and truth." *Journal of Philosophical Logic* 49.3 (2020): 439-474.

[5] Schindler, Thomas. "A Disquotational Theory of Truth as Strong as Z_2^- ." *Journal of Philosophical Logic* 44 (2015): 395-410.