

Corrigendum: Using Ramsey's theorem once

Jeffrey L. Hirst* Carl Mummert†

June 23, 2020

In [1], the first definition should be as follows:

Definition 1. Suppose \mathcal{T} is a theory extending intuitionistic predicate calculus and $\mathsf{P}:\forall x(p_1(x) \rightarrow \exists y p_2(x, y))$ and $\mathsf{Q}:\forall u(q_1(u) \rightarrow \exists v q_2(u, v))$ are problems. We say \mathcal{T} proves Q with one typical use of P if the following two sentences hold:

- (1) For a variable u there is a term x_u such that using only axioms of \mathcal{T} and the assumption $q_1(u)$, and holding the free variables of $q_1(u)$ constant, there is a deduction of $p_1(x_u)$.
- (2) For a previously unused variable y , there is a term $v_{x_u, y}$ such that using only axioms of \mathcal{T} , lines from the proof in sentence (1), and the assumptions $q_1(u)$ and $p_2(x_u, y)$, while holding the free variables of $q_1(u)$ and $p_2(x_u, y)$ constant, there is a deduction of $q_2(u, v_{x_u, y})$.

The revised definition applies to theories extending intuitionistic predicate calculus, matching the formulation of Lemma 1, which immediately follows the definition in the article. The restrictions on holding variables constant are exactly those needed for the applications of the deduction theorem in the proof of Lemma 1. Essentially, Definition 1 divides a proof into two parts, before and after a single application of P . The second portion of the proof may make use of the lines from the first portion as noted in the second sentence of the revised definition. This modification is useful in the proof of Theorem 4, the last theorem of the article.

Bibliography

- [1] Jeffrey L. Hirst and Carl Mummert, *Using Ramsey's theorem once*, Arch. Math. Logic **58** (2019), no. 7-8, 857–866, DOI 10.1007/s00153-019-00664-z. MR4003638

*Department of Mathematical Sciences, Appalachian State University, Walker Hall, Boone, NC 28608. *Email:* hirstjl@appstate.edu ORCID:0000-0002-8273-8951

†Department of Mathematics, Marshall University, 1 John Marshall Drive, Huntington, WV 25755. *Email:* mummertc@marshall.edu ORCID:0000-0002-8290-9458