

Correction to the paper „Some Impredicative Definitions in the Axiomatic Set-Theory” by Andrzej Mostowski.

(Fund. Math. 37, 1950, p. 118).

Dr Hao Wang from the University of Harvard has called my attention to the fact that a statement made on p. 118 of my cited paper is incorrect.

Contrary to what is said in the quoted place the scheme

(Σ) if Φ is provable in (S) , then Φ is true

contains formulas which are certainly unprovable in (S') provided that the system (S) is consistent. Indeed, if Φ_0 is an arbitrary formula of (S) such that the negation of Φ_0 is provable in (S) , then the sentence

if Φ_0 is provable in (S) , then Φ_0 is true

could be provable in (S') only if (S) were inconsistent.

The correct wording of the scheme (Σ) is as follows:

(Σ^*) For every Φ — if Φ can be proved in (S) in at most n steps from at most n axioms, then Φ is true ($n=1,2,3,\dots$).

It is exactly this scheme which is actually proved in the paper (cf. scheme (Σ_{11}) on p. 121). The scheme (Σ) although stated in the introductory remarks to the section 2 was neither proved nor used anywhere in the paper.

For symmetry one could still reformulate the theorem (T) on p. 118 as follows:

(T) For every Φ and every n — if Φ can be proved in (S) in at most n steps from at most n axioms, then Φ is true.

Note that in the incorrect scheme (Σ) it is the letter „ Φ ” which has to be replaced by an arbitrary formula of (S) in order to obtain a sentence of (S') whereas in the correct scheme (Σ^*) the variable „ Φ ” is bound and a sentence of (S') can be obtained upon substituting an arbitrary numeral 1, 2, ... for the variable „ n ”.

