ERRATUM

In the report of the 1995–1996 Annual Meeting of the Association for Symbolic Logic in Madison Wis, p. 468 in Volume 2, the fourth sentence from the end in Prof. John Corcoran's abstract was inadvertently garbled during the typesetting process. We regret the error, which was not in any way the fault of the author, and we reprint here the abstract in its entirety.

► JOHN CORCORAN, *Semantic omega properties and mathematical induction*.
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The semantic omega properties, semantic omega-completeness, SOC, and semantic omega-inconsistency, SOI, occur in the context of the 1931 Gödel incompleteness article. The 1931 article involves an interpreted higher-order language whose only non-logical constants are the zero symbol (0) and the successor symbol (here s) and whose universe is the class of natural numbers. Accordingly the principle of mathematical induction is expressed by a single sentence, PMI (Gödel's axiom I3). PMI expresses a property-universal proposition: every property belonging to zero and to the successor of every number to which it belongs also belongs to every number. The numerals are: 0, $s0$, $ss0$, ... A numeral instance of a number-universal sentence is the result of deleting the initial quantifier and substituting one and the same numeral for all freed occurrences of the variable. A set of sentences (such as the set of arithmetic truths) is SOC if and only if it implies every number-universal sentence all of whose numeral instances it implies. This paper centers on the fact that *a set of sentences is SOC if and only if it implies PMI*. This fact is established by reference to well-known semantic features of PMI and to logical features of a sentence called alternative mathematical induction, AMI. AMI expresses the proposition that every number has every property belonging to zero and to the successor of every number to which it belongs. AMI is a number-universal sentence equivalent to PMI. Moreover, AMI is paratautological in the sense that it is a number-universal sentence every numeral instance of which is tautological. Thus, AMI, and equivalently PMI, is implied by every set which is SOC. A set of sentences is SOI if and only if it implies every numeral instance of a number-universal sentence whose negation it implies, i.e., it implies the negation of a universal sentence all of whose instances it implies. Reasoning similar to the above is used to establish the fact that *a set of sentences is SOI if and only if it implies the negation of PMI*. The negation of PMI is equivalent to a paracontradictory sentence, a number-existential sentence every numeral instance of which is contradictory, or unsatisfiable. First-order analogues of the above are also mentioned.