

CORRIGENDUM TO “NUMBER SYSTEMS WITH SIMPLICITY
HIERARCHIES: A GENERALIZATION OF CONWAY’S THEORY OF
SURREAL NUMBERS”

PHILIP EHRLICH

An ordered class $\langle A, < \rangle$ is said to have *cofinal* (resp. *coinitial*) *character* α if α is the least ordinal $\leq On$ such that there is a cofinal (resp. coinitial) subclass of $\langle A, < \rangle$ that is isomorphic to α (resp. $^*\alpha =$ the inverse of α). While having no impact on the proofs of the paper’s other results, statement (iii) of Theorem 4 of [1, p. 1237] contains a minor error: it fails to mention that “ $\langle A, < \rangle$ has cofinal character On and coinitial character On .” Except for obvious additions, the published proof remains the same and the corrected statement of the theorem reads:

THEOREM 4. *For a lexicographically ordered binary tree $\langle A, <, <_s \rangle$ the following are equivalent:*

- (i) $\langle A, <_s \rangle$ is full;
- (ii) $\langle A, <, <_s \rangle$ is complete;
- (iii) $\langle A, < \rangle$ has cofinal character On and coinitial character On , and the intersection of every nested sequence $I_\alpha (0 \leq \alpha < \beta \in On)$ of nonempty convex subclasses of $\langle A, <, <_s \rangle$ is nonempty (and, hence, by Theorem 1, contains a simplest member.)

Without the addendum, (iii) would merely imply that $\langle A, < \rangle$ is a convex subclass of a lexicographically ordered full binary tree.

REFERENCES

- [1] P. EHRLICH, *Number systems with simplicity hierarchies: A generalization of Conway’s theory of surreal numbers*, this JOURNAL, vol. 66 (2001), pp. 1231–1258.

DEPARTMENT OF PHILOSOPHY
OHIO UNIVERSITY
ATHENS, OH 45701, USA
E-mail: ehrlich@ohiou.edu

Received March 31, 2005.