A CORRECTION FOR *AN AXIOMATIC APPROACH TO SYMMETRIC EXTENSIONS*

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Abstract. We would like to clarify some inaccuracies in the paper mentioned in the title. In a nutshell, in the first two sentences following the statement of Axiom (3) in Section 3 of our paper, there is some confusion about which notion of equality should be made use of. What is written in the original paper (literal equality) doesn't quite work, and the notion of equality that should be used isn't actually introduced. We will present an easy fix in the below.

The first two sentences following the statement of Axiom (3) should be replaced by the following:

For $a, a' \in M$, we inductively define that $a \equiv a'$ if the following hold:

- whenever $p \in P$ and $b \in_p a$, then there exists b' such that $b \equiv b'$ and $b' \in_p a'$, and
- whenever $p \in P$ and $b' \in_p a'$, then there exists b such that $b \equiv b'$ and $b \in_p a$.

Note that $\equiv$ is an equivalence relation on M. Ω induces an action of $\mathcal{G}$ on M with respect to $\equiv$ in the following sense:

- $\Omega(\mathrm{id})(b) \equiv b$ for all $b \in M$, and
- $\Omega(\pi_1)(\Omega(\pi_2)(b)) \equiv \Omega(\pi_1 \circ \pi_2)(b)$ for all $\pi_1, \pi_2 \in \mathcal{G}$ and all $b \in M$.

Let the *symmetry group* of $a \in M$ be

$$\mathrm{sym}(a) = \{\pi \in \mathcal{G} \mid \Omega(\pi)(a) \equiv a\},$$

which is indeed a subgroup of $\mathcal{G}$ by the above.

From here onward, the original paper may be followed again.

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