

**ERRATUM TO NOTES ON 2-GROUPOIDS, 2-GROUPS AND
CROSSED MODULES**

It was brought to my attention by Ettore Aldrovandi that there is an error in the axioms for a weak map of crossed-modules (Definition 8.4). Although this definition is not used anywhere in the paper, I feel obliged to provide a corrected version.

Definition 0.1. Let \mathfrak{G} and \mathfrak{H} be crossed modules. A *weak map* $P: \mathfrak{H} \rightarrow \mathfrak{G}$ consists of the following data:

- a pointed set map $p_1: H_1 \rightarrow G_1$,
- a pointed set map $p_2: H_2 \rightarrow G_2$,
- a set map $\varepsilon: H_1 \times H_1 \rightarrow G_2$, denoted by $(x, y) \mapsto \varepsilon_{x,y}$.

These data should satisfy the following conditions:

- W1.** $\forall \alpha \in H_2, p_1(\underline{\alpha}) = p_2(\alpha)$;
- W2.** $\forall \alpha, \beta \in H_2, p_2(\alpha\beta) = p_2(\alpha)p_2(\beta)\varepsilon_{\underline{\alpha},\underline{\beta}}$;
- W3.** $\forall x, y \in H_1, p_1(xy) = p_1(x)p_1(y)\varepsilon_{x,y}$;
- W4.** Cocycle condition:

$$\forall x, y, z \in H_1, \varepsilon_{x,y}^{p_1(z)} \varepsilon_{xy,z} = \varepsilon_{y,z} \varepsilon_{x,yz};$$

- W5.** Equivariance:

$$\forall x \in H_1, \forall \beta \in H_2, \varepsilon_{x^{-1},x} p_2(\beta^x) = p_2(\beta)^{p_1(x)} \varepsilon_{\underline{\beta},x} \varepsilon_{x^{-1},\underline{\beta}x}.$$

Remark 0.2. Ettore Aldrovandi has found a two-variable version of **(W5)** that, in the presence of the other axioms, is equivalent to **(W5)**.

- W5'.** Two-variable version:

$$\forall x, y \in H_1, \forall \beta \in H_2, \varepsilon_{y,x} p_2(\beta^x) \varepsilon_{yx,x^{-1}\underline{\beta}x} = p_2(\beta)^{p_1(x)} \varepsilon_{\underline{\beta},x} \varepsilon_{y,\underline{\beta}x}.$$