ERRATA AND ADDENDA FOR PLETHYSTIC ALGEBRA BY JAMES BORGER AND BEN WIELAND

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Thanks to Lance Gurney and Bill Messing for drawing my attention to the issues below.

0.1. *Erratum.* Page 2, subsection 1.3. The symbol c in the line labeled (1.3.1) is meant to denote an element of k, not of k'. However the symbol c in the line labeled (1.3.2) does correctly denote an element of k'. The following changes to page 2 of the text would correct this:

line -13: "$c \in k'$" $\rightarrow$ "$c \in k, c' \in k'$"
line -12: no changes
line -8: "$s \odot c = \beta(c)(s)$" $\rightarrow$ "$s \odot c' = \beta(c')(s)$"

Observe that when $k = k'$, what is written is correct.

0.2. *Addendum.* Page 2, subsection 1.3, lines -9,-10. The individual elements $s_i^{(1)}, s_i^{(2)}, s_i^{[1]}, s_i^{[2]}$ depend on choices, but the summations in these two lines are independent of all choices, subject to the relations in (1.3.1). You can show this directly. Alternatively, we can re-express $\Delta_S^+(s)(r,r')$ and $\Delta_S^\times(s)(r,r')$ in the following way, which doesn't involve any choices.

Let $S\tilde{\odot}_{k'}R$ denote the k-ring generated by symbols $s \odot r$, for all $s \in S, r \in R$ modulo the (corrected) relations in (1.3.1): for all $s, s' \in S$, $r \in R$, $c \in k$

$$ss' \odot r = (s \odot r)(s' \odot r), \quad (s + s') \odot r = (s \odot r) + (s' \odot r), \quad c \odot r = c.$$

Therefore, given any element $r \in R$, the map

$$S \longrightarrow S\tilde{\odot}_{k'}R, \quad s \mapsto s \odot r$$

is k-ring map. Thus, given elements $r, r' \in R$, the coproduct property of $\otimes$ induces a k-ring map

$$S \otimes S \longrightarrow S\tilde{\odot}_{k'}R, \quad s \otimes s' \mapsto (s \odot r)(s' \odot r').$$

For any element $x \in S \otimes S$, let $x(r, r')$ denote the image of x under this map. Then $\big(\Delta_S^+(s)\big)(r,r')$ and $\big(\Delta_S^\times(s)\big)(r,r')$ are elements of $S\tilde{\odot}_{k'}R$ that don't depend on any choices.

So we then define $S \odot_{k'} R$ to be the quotient of $S\tilde{\odot}_{k'}R$ by the relations of (1.3.2): for all $s \in S$, $r, r' \in R$, $c' \in k'$:

$$s \odot (r + r') = \big(\Delta_S^+(s)\big)(r,r'), \quad s \odot (r + r') = \big(\Delta_S^\times(s)\big)(r,r'), \quad s \odot c' = \big(\beta(c')\big)(s).$$

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