"SYMMETRIES OF ALGEBRAS, VOLUME 1" BY C. WALTON
UPDATES AND CORRECTIONS

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Mathematical corrections.

§2.4.4, pages 97–99. A Morita equivalence between ($\Bbbk$-)algebras is an equivalence between their *linear* categories of modules. In line -2 of page 97, replace "as categories" with "as linear categories". Add "as linear categories" at the beginning of line 3 in the statement of Theorem 2.18. In lines 2 and -3 of the proof of Theorem 2.18, and in the claim statement, replace "functors" with "linear functors". In lines 5 and 8 of the proof of Theorem 2.18, replace "of categories" with "of linear categories".

Various locations, starting on page 162. The notation $\mathsf{FdVec}_G\,/\,\mathsf{FdVec}_G^{\omega}$ should be used in place of $\mathsf{Vec}_G\,/\,\mathsf{Vec}_G^{\omega}$ when referring to a rigid category. Replace: one typo in Table 3.1 on page 162; one typo in line -3 on page 182; three typos in Remark 4.69 on page 254; two typos in Example 4.95 on page 265; all (fifteen) categories should have the prefix Fd in Example 4.98 on page 266; two typos in Exercise 4.57 on page 286; one typo in Exercise 4.61 on page 287; one typo in Exercise 4.62 on page 287; and both categories should have the prefix Fd in Exercise 4.63 on page 287. The notation FdVec_G and $\mathsf{FdVec}_G^{\omega}$ should be added to the Index of Notation.

Moreover, the notation $\mathsf{FdVec}_N\,/\,\mathsf{FdVec}'_G$ should be used in place of $\mathsf{Vec}_N\,/\,\mathsf{Vec}'_G$ when referring to a potential rigid category. Replace two typos in Table 3.1 on page 162.

§4.5.1ii, page 236. Line 3: "can be remedied if B is a" → "can be remedied if A is a".

§4.6.3, page 242. Change $\mathbb{N}\text{-}\mathsf{GrAlg}_A(\mathcal{C})$ to $\mathbb{N}\text{-}\mathsf{GrMod}_A(\mathcal{C})$ (twice), and change $\mathbb{N}\text{-}\mathsf{GrAlg}(\mathcal{C})_A$ to $\mathbb{N}\text{-}\mathsf{GrMod}(\mathcal{C})_A$, and change $\mathbb{N}\text{-}\mathsf{GrAlg}_{B_1}(\mathcal{C})_{B_2}$ to $\mathbb{N}\text{-}\mathsf{GrMod}_{B_1}(\mathcal{C})_{B_2}$. Update in Index of Notation.

§4.14, page 276. In Exercise 4.2(b), replace "$g \triangleright p_{g'} := p_{g'g}$" with "$g \triangleright p_{g'} := p_{gg'}$".

Minor updates.

§1.0, page 15. Line -3: "are provided are" → "are provided in".

§1.3.2, page 38. There should be (more descriptive) names for the morphisms and axioms attached to left A-modules. "Action map" should be "left action map", and the two following diagrams should be labelled as "left module associativity" and "left module unitality", respectively. Also, the map $\triangleleft := \triangleleft_V$ should be called a "right action map".

§1.3.2, page 39. Line 9: "(left) module map" → "a (left) module map"

§1.3.3, page 40. Line 7: the "(A, A)-bimodule" → "an (A, A)-bimodule".
Line 16: "bimodule map" → "a bimodule map".

§**1.4.3i, page 46.** Prop. 1.20, line 2: "a (A, B_2)-bimodule" → "an (A, B_2)-bimodule".

§**1.11, page 65.** In Exercises 1.19 and 1.20, use ϕ instead of f.

§**2.2.1v, page 79 / Indices**. Add "$\vec{0}_{X,Y}$" to the index of notation.

§**2.2.2i, page 82.** Lines 2-3: "includes Vec itself; see §1.1.4iv." → "includes Vec itself (see §1.1.4iv), and A-Mod for a $\Bbbk$-algebra A."

§**3.3.1, pages 148.** Add to line 9 (skipping diagram), "Isomorphic $\mathcal{C}$-module categories are defined likewise."

§**4.1.3, page 209.** Rename section as "Enriched endomorphism algebras".

§**4.2.1, page 211.** Line 2 in the proof of Proposition 4.13: "morphism $\alpha' : I \to A$ such that $\phi_{\text{obj}}\, \alpha' = {}_I\vec{0}_{A'}$" → "a morphism $\alpha' : I \to A$ such that $\phi_{\text{obj}}\, \alpha' = \vec{0}_{I,A'}$".

§**4.5.2, pages 236-238.** Subsection titles: remove "in $\mathcal{C}$" for consistency, and "monoidal" → "tensor" in part iii.

§**4.5.2iii, page 238.** Line 5 of the proof of Lemma 4.44: Add full stop.

§**4.9.3, page 258.** Line 6: "an algebra A" → "a nonzero algebra A".

§**4.14, page 277**. Rephrase Exercise 4.6 as "[...] collection of algebras [...] forms a category (denoted by $\mathsf{Alg}(\mathcal{C})$)."

§**4.14, page 286 / Indices**. From Exercise 4.58: Add "invariant subalgebra" to the index of terminology and "A^G" to the index of notation.