# Errata to “An Invitation to Coarse Groups”

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## 1 Mathematical issues

1. Proposition 2.3.3: In the right side of the correspondence one needs to put *non-empty* families of partial coverings satisfing (C0)–(C2).
2. Section 2.6, before Remark 2.6.3. To be precise we should have written: “. . . their product is the unique coarse map $f_1 \times f_2 \colon Z \to X \times Y$ such that the relevant diagrams commutes”.
3. Section 8.3 line 7: the norm distance is only bi-invariant on the group of *unitary* operators (as opposed to bounded). This is however not an interesting examples, as it is bounded. More interesting is to consider the Hilbert–Schmidt norm on groups of finite-dimensional unitary matrices and let the dimension increase.
4. Example 9.2.2, line 7: the open “covering” $\{2^{n+1}\mathbb{Z} - 2^n\mathbb{Z} \mid n \geq 0\}$ is not a covering, because it does not contains 0. For that we need to add one more open, *e.g.* $3\mathbb{Z}$.
5. Across pages 215–216: “each fragment of the coproduct is completely contained in a unique $X_i$” should be: “each fragment of the coproduct is completely contained in a finite union of $X_i$’s”

## 2 Grammatical errors and typos

6. page 3, line 2: “For instance, it can be used/it is useful to identify a topological group with any of its cocompact lattices".
7. page 24, line 12: “Fix a set $X$ be set and denote" should be: “Fix a set $X$ and denote"
8. Footnote on page 24: “by identify" should be “by identifying"
9. Footnote on page 24: “with its graphs graph$\subseteq X \times X$" should be “with its graph graph$(f) \subseteq X \times X$"
10. Footnote on p.30 should say “adverb” rather than “adjective”.
11. page 32, line 6: in the formula there should be $\mathfrak{a}_i$ instead of $\mathfrak{a}_a$.
12. Figure 2.2: It would be better to say explicitely that $\mathfrak{a}$ is the partial covering consisting of all the $A_i$’s (the black cicles).
13. Section 2.6, page 38, before eq (2.1): $\langle E_i \mid i \in I \rangle \otimes \langle F_j \mid j \in J \rangle = \ldots$
14. Definition 3.3.1. it would be more correct to write $[\{x\}]$ instead of $[x]$.

15. pages 46 (twice) and 86: “coarse function" should be “coarse map".
16. page 54, line 7: “coarse spac” should be “object”.
17. page 54, 4 lines after Example 4.1.2: “on set of morphisms" should be “on the set of morphisms".
18. page 56, line 11: “$\mathrm{Mor}_{\mathbf{Crs}}(\mathrm{pt}, \boldsymbol{G})$” should be “$\mathrm{Mor}_{\mathbf{Crs}}(\mathrm{pt}, \boldsymbol{G})^I$”
19. Definition 5.1.5, last line: “some $\mathbb{R}$-quasimorphisms”.
20. Example 5.4.9, line 10: $(\ell^2(\mathbb{N}), \mathcal{E}_{\|\cdot\|_2})/\langle\langle A \times A \rangle\rangle$ coincides with $(\ell_2(\mathbb{N}), \mathcal{E}_{\|\cdot\|_2'})$.
21. line 4 of Section 9.3: “So much so, that it is often complicated. . . ”
22. Remark 9.3.3: “the coarsifications thus obtained do indeed give. . . "