ERRATA AND ADDENDA FOR 'GALOIS GROUPS AND FUNDAMENTAL GROUPS'

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The following list rectifies errors I am currently aware of. They will be hopefully corrected in future printings.

Thanks to Arturo Pianzola, Alexander Schmidt and Axel Stäbler for pointing out the first mistakes. If you find more, please contact the author.

p. 23. Typo in last line: the m should be n.

p. 60, last paragraph: The name of Josip Plemelj is misspelled twice.

p. 166, line 1: replace $\mathbf{Z}/n\mathbf{Z}$ by $\mathbf{Z}/m\mathbf{Z}$.

p. 166. In Proposition 5.3.16 (1) replace 'G-torsor' by 'connected G-torsor'. In the second statement of Proposition 5.3.16 (2) assume Y is geometrically connected.

Of course one can generalize the notion of Galois cover to include non-connected covers as well, and then one gets a complete correspondence in Proposition 5.3.16 (1). See Construction 3.5.2 for a related discussion in the topological setting.

p. 186 After the second proof of Corollary 5.7.6 I could have added another remark which complements the discussion. Indeed, Pop's argument explained there shows that the statement of Proposition 5.6.7 also holds for canonically defined quotients of the fundamental group that are known to be topologically finitely generated. For a connected scheme separated and of finite type over an algebraically closed field of characteristic $p \geq 0$ the maximal prime-to-p quotient of the fundamental group is known to be topologically finitely generated by SGA7, exposé XII, complemented by [F. Orgogozo, Altérations et groupe fondamental premier à p, *Bull. Soc. Math. France* 131 (2003), 123–147]. Therefore the second proof of Corollary 5.7.6 shows that for such schemes the prime-to-p fundamental group does not change under extensions of algebraically closed fields.

By the way, in Orgogozo's paper (which I should have cited) it is also proven that the prime-to-p fundamental group is compatible with direct products. This generalizes Corollary 5.6.6 (which does not hold for the p-part in the non-proper case).

Date: February 6, 2012.

p. 201. In Theorem 5.8.16 (Lang) add the assumption X is normal. As A. Schmidt points out, the statement is false for the projective line with a double point over $\mathbf{F}_p$.

In Fact 5.8.17 the simple pole of ζ_X is at $s = \dim(X)$ under the further assumption that X is irreducible. This is used in the proof of 5.8.16: if X is normal, Y is normal too by Proposition 5.2.12 (3); as it is connected, it is irreducible as well and the result on zeta functions applies to ζ_Y.

p. 212, line -6: $\phi \otimes \phi$ should be replaced by $\phi \otimes \psi$.

p. 227, fourth line after diagram: the R should be an A.

p. 251, line 12: insert 'locally' before 'direct summand'.

p. 253, last paragraph: in the definition of an essentially finite sheaf one should moreover require $\mathcal{F}'$ and $\mathcal{F}''$ to be semistable.