

COMMENTS ON “CATEGORICAL REPRESENTATION OF LOCALLY NOETHERIAN LOG SCHEMES”

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(1.) The theory exposed in §2 contains *errors*, as follows:

- the *necessity* asserted in Proposition 2.3, is *false*;
- the *isomorphism* asserted [unfortunately, without an *explicit proof!*] in Lemma 2.6, (ii), is *false*.

At the level of *main results* of the present paper, these errors in the theory of §2, do not affect the proof of Theorem A given in §1, but they *do* affect the *proof* — although *not the validity!* — of Theorem B. This result Theorem B is given a *correct proof* in [MnLgSch], §3 [cf. [MnLgSch], Theorem 3.8, (iii)]. Also, the errors referred to above are discussed in more detail in [MnLgSch], Example 0.3; [MnLgSch], Remark 1.4.1. At the level of *main results* of papers of the author *subsequent* to the present paper, the *only place* where the errors in the theory of §2 have an affect is in the portion of the proof of the *main result* of [ArLgSch] [i.e., [ArLgSch], Theorem 5.1] that involves the theory of [ArLgSch], §4. The affected portions of [ArLgSch], §4, are discussed in more detail in the introduction to [MnLgSch], §4. The main result [ArLgSch], Theorem 5.1, of [ArLgSch] is given a *correct proof* in [MnLgSch], §4 [cf. [MnLgSch], Theorem 4.8, (iv)]. More details on the affected portions of the present paper, as well as of [ArLgSch], may be found in the Appendix to [MnLgSch].

(2.) In the first paragraph of the proof of Lemma 2.5, the notation “ $Q \in V_{\mathbb{Z}}$ ” should read “ $Q \subseteq V_{\mathbb{Z}}$ ”.

(3.) In the second sentence of the statement of Proposition 2.7, the phrase “(*necessarily uniquely!*) *though*” should read “(*necessarily uniquely!*) *through*”. In the second paragraph of the proof of Proposition 2.7, the phrase “(*uniquely*) *though*” should read “(*uniquely*) *through*”.

(4.) In the discussion immediately following the display in the statement of Corollary 2.12, (ii), the notation “ $\text{Sch}(X^{\log})$ ” should read “ $\text{Sch}^{\log}(X^{\log})$ ”.

(5.) In Lemma 2.16, (iii), the phrase “*a monomorphism*” should read “*a **scheme-like monomorphism***”.

Bibliography

- [ArLgSch] S. Mochizuki, Categories of log schemes with archimedean structures, *J. Math. Kyoto Univ.* **44** (2004), pp. 891-909.
- [MnLgSch] S. Mochizuki, Monomorphisms in Categories of Log Schemes, preprint.