

# ERRATA TO “DISCRIMINANTS IN THE GROTHENDIECK RING”

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The definition of  $\mathcal{M}$  in Section 1.1 should be the quotient of  $K_0(\mathrm{Var}_{\mathbb{K}})$  by relations of the form  $[X] - [Y]$  whenever  $X \rightarrow Y$  is a radicial surjective morphism of varieties over  $\mathbb{K}$ , and all further statements in the paper should use this corrected definition. This quotient of the Grothendieck ring is often taken for applications to motivic integration (see [Mus11, Section 7.2] and [CNS18, Section 4.4]). When  $\mathbb{K}$  has characteristic 0, these additional relations were already trivial in  $K_0(\mathrm{Var}_{\mathbb{K}})$  (e.g. see [Mus11, Prop 7.25]). The motivic measure of point counting over a finite field still factors through this new definition of  $\mathcal{M}$ . This correction is necessary so that the proofs in the paper, in particular those of Theorem 1.13 and in Section 5, are correct. The arguments claim equality in  $\mathcal{M}$  of  $[X]$  and  $[Y]$  where we have a morphism  $X \rightarrow Y$  that is bijective on points over any algebraically closed field. Such an argument is valid in the corrected definition of  $\mathcal{M}$  above ([Mus11, Remark A.22]), but is not known to be valid in  $K_0(\mathrm{Var}_{\mathbb{K}})$ .

We thank Margaret Bilu and Sean Howe for pointing out this mistake and the necessary correction. See [BH19] for further discussion of this issue.

## REFERENCES

- [BH19] Margaret Bilu and Sean Howe. Motivic Euler products in motivic statistics. *arXiv:1910.05207 [math]*, October 2019.
- [CNS18] Antoine Chambert-Loir, Johannes Nicaise, and Julien Sebag. *Motivic Integration*. Progress in Mathematics. Birkhäuser Basel, 2018.
- [Mus11] Mircea Mustață. *Zeta Functions in Algebraic Geometry*. 2011. [http://www-personal.umich.edu/~mmustata/zeta\\_book.pdf](http://www-personal.umich.edu/~mmustata/zeta_book.pdf).

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