$\mathcal{K}_g$ is not finitely generated

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We would like to report that a fatal error was recently discovered in the proof of our paper [1].

As pointed out to us by Masatoshi Sato, there is a mistake in Proposition 2.2. The intersection number in the case $j' = i + g''$ is not correct. Indeed, Tom Church has found an example to show that the subspace $W \otimes L$ is not invariant by $\rho(\mathcal{K}_g)$: let C be any separating curve cutting off the subspace spanned by $\{b_1 + b_2, a_1, b_2 + b_3, a_3\}$. Then $\hat{\rho}(T_C)([b_2, b_3])$ does not lie in $W \otimes L$.

The subspace W vanishes when the genus of the surface equals 2—the case covered by McCullough-Miller [2].

Thus the problem of finite generation for $\mathcal{K}_g$, $g > 2$ should be considered an open problem. We apologize for this mistake, and we'd like to thank Masatoshi Sato and Tom Church for helping to explain the problem.

References

1. Biss, D., Farb, B.: $\mathcal{K}_g$ is not finitely generated. *Invent. Math.* **163**(1), 213–226 (2006)
2. McCullough, D., Miller, A.: The genus 2 Torelli group is not finitely generated. *Topol. Its Appl.* **22**(1), 43–49 (1986)

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