Correction to "Asymptotic optimal designs under long-range dependence error structure" *Bernoulli* **15** (2009) 1036–1056

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In the beginning of Section 4.1 of [1], there is a mistake in two intermediate formulas which, however, does not effect the final results.

The first incorrect formula is the formula for the functional $\Psi_\alpha(p)$ in the middle of page 1047. The correct version of this formula is

$$\Psi_\alpha(p) = \frac{\int f^2(t) Q_\alpha(\int p(u)\,du / p(t)) p(t)\,dt}{(\int f^2(t) p(t)\,dt)^2} \int p(t)\,dt.$$

Exactly the same technique as described in the original version of the paper is applicable for this functional. It gives a version of the three formulas in (4.2), see top of page 1048. The first two formulas in (4.2) are unchanged but the formula for $\tilde{\tau}$ differs. Its correct version is

$$\tilde{\tau} = \int f^2(t) Q_\alpha(1/p^*(t)) p^*(t)\,dt + \int f^2(t) Q'_\alpha(1/p^*(t))\,dt. \tag{1}$$

The form (4.3) for the optimal density $p^*(t)$ and Theorem 2 on page 1049 remain valid as stated in the original text.

Note that the value $\tilde{\tau}$ given in (1) coincides with the value of τ, the parameter of the optimal density $p^*(t)$. To see this, compare (1) above and (4.4) on page 1048. There is no contradiction here as for computing τ we did use the value of $\tilde{\tau}$.

The authors apologize for the error and express their thanks to J. Beran who pointed out the mistake.

Reference

[1] Dette, H., Leonenko, N., Pepelyshev, A. and Zhigljavsky, A. (2009). Asymptotic optimal designs under long-range dependence error structure. *Bernoulli* **15** 1036–1056. MR2597582