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ERRATUM TO: A BAYESIAN SIGNIFICANCE TEST OF CHANGE FOR CORRELATED OBSERVATIONS

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The paper "A Bayesian significance test of change for correlated observations", published in the Journal of Discussiones Mathematicae, Probability and Statistics 34 (2014) pages 51–62, has of the unfortunate typos in some expressions. Is missing the minus sign in the formulas of the likelihood function and the posterior distribution of θ. Also, the letter S has replaced $\tau^{\frac{m}{2}-1}$ in the formulas of the posterior conditional distribution of m and the joint posterior distribution of m, ϕ^p, μ_1 and τ.

- In page 52, line 22, the likelihood function based on the observations $y = (y_1, y_2, \ldots, y_n)$ should be:

$$l(y/\theta) \propto r_1^{\frac{m}{2}} r_2^{\frac{n-m}{2}} \exp\left\{-\frac{r_1}{2}\left[\sum_{t=1}^{m}(y_t - \mu_1 - \sum_{i=1}^{p}\phi_i(y_{t-i} - \mu_1)\right]^2\right\}$$
$$\exp\left\{-\frac{r_2}{2}\left[\sum_{t=m+1}^{m+p}(y_t - \mu_2 - \sum_{i=1}^{p}\phi_i\Big(y_{t-i} - \gamma_{t-i}\mu_1 - (1-\gamma_{t-i})\mu_2\Big)\right]^2\right\}$$
$$\exp\left\{-\frac{r_2}{2}\left[\sum_{t=m+p+1}^{n}(y_t - \mu_2 - \sum_{i=1}^{p}\phi_i(y_{t-i} - \mu_2)\right]^2\right\}.$$

- In page 54, line 12, the posterior distribution of θ should be:

$$\pi(\theta/y) \propto r_1^{\frac{m}{2}-1} r_2^{\frac{n-m}{2}-1} \exp\left\{-\frac{r_1}{2}\left[\sum_{t=1}^{m}(y_t-\mu_1-\sum_{i=1}^{p}\phi_i(y_{t-i}-\mu_1)\right]^2\right\}$$
$$\exp\left\{-\frac{r_2}{2}\left[\sum_{t=m+1}^{m+p}(y_t-\mu_2-\sum_{i=1}^{p}\phi_i\Big(y_{t-i}-\gamma_{t-i}\mu_1-(1-\gamma_{t-i})\mu_2\Big)\right]^2\right\}$$
$$\exp\left\{-\frac{r_2}{2}\left[\sum_{t=m+p+1}^{n}(y_t-\mu_2-\sum_{i=1}^{p}\phi_i(y_{t-i}-\mu_2)\right]^2\right\}.$$

- In the theorem, page 56, line 2, the posterior conditional distribution of m should be:

$$\pi(m/\phi^p,\mu_1,\tau,y) \propto a(m,\phi^p)^{-\frac{1}{2}}\tau^{\frac{m}{2}-1}\left\{\tau SS_1(m,\phi^p,\mu_1)+SS_2(m,\phi^p,\mu_1)\right\}^{-\frac{n-1}{2}}.$$

- In the appendix A, proof of the theorem, page 60, line 10, the joint posterior distribution of m, ϕ^p, μ_1 and τ should be:

$$\pi(m,\phi^p,\mu_1,\tau/y) \propto a(m,\phi^p)^{-\frac{1}{2}}\tau^{\frac{m}{2}-1}\left\{\tau SS_1(m,\phi^p,\mu_1)+SS_2(m,\phi^p,\mu_1)\right\}^{-\frac{n-1}{2}}.$$