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CORRECTION

SMOOTH DISCRIMINATION ANALYSIS

BY ENNO MAMMEN AND ALEXANDRE B. TSYBAKOV

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In the proof of Theorem 3 (further abbreviated as T3) the following changes should be made for the case $\mathcal{F} = \mathcal{F}_{frag}$. The function g_0 has to be chosen as $g_0(x) = \mathbf{I}\{x \in K\}$ and f_ω should be defined as

$$\begin{aligned} f_\omega(x) = (1+\eta_0+b_1)\mathbf{I}\left\{0 < x_2 < \frac{1}{2}\right\} \\ &+ \left\{1 + \left[\frac{b(x_1,\omega)-x_2}{c_2}\right]^{1/\alpha}\right\}\mathbf{I}\left\{\frac{1}{2} \le x_2 \le b(x_1,\omega)\right\} \\ &+ (1-2b_1)\mathbf{I}\left\{b(x_1,\omega) < x_2 \le \frac{1}{2} + \tau M^{-\gamma}\right\} \\ &+ \big(1-\eta_0-b_2-b_3(\omega)\big)\mathbf{I}\left\{\frac{1}{2}+\tau M^{-\gamma} < x_2 \le 1\right\}, \end{aligned}$$

where $\eta_0, b_1, \omega, \tau, M, \gamma$ are as in T3, $b_2 = (b_1 + 2\eta_0\tau M^{-\gamma})(1-2\tau M^{-\gamma})^{-1}$ and $b_3(\omega)$ is a constant such that $\int f_\omega(x)\,dx = 1$. The newly defined $b_3(\omega)$ differs from $b_3(\omega)$ in T3 by the additional summand on line 12 on page 1825:

$$2b_1\big(\tfrac{1}{2} - \tau M^{-\gamma}\big)^{-1}\int_0^1 \big[\tfrac{1}{2} + \tau M^{-\gamma} - b(x_1,\omega)\big]\,dx_1.$$

It can be easily checked that the newly defined $b_3(\omega)$ also satisfies the final equalities in (48) and in (52). For the proof of the last line on page 1825 one should proceed for $\eta < b_1$ as in T3, but for $b_1 \le \eta \le \eta_0$ one must use the crude bound

$$\begin{aligned} \lambda\{x \in K : |f_\omega(x) - g_0(x)| \le \eta\} &\le \lambda\big\{x \in K : \tfrac{1}{2} \le x_2 \le \tfrac{1}{2} + \tau M^{-\gamma}\big\} \\ &= \tau M^{-\gamma} \le c_2\eta^\alpha, \end{aligned}$$

where the first inequality holds for M large enough. The expression in the last line on page 1826 has to be replaced by

$$\int_0^1\left[\int_{1/2}^{1/2+\varphi_1(x_1)}\big\{\sqrt{1-2b_1} - \sqrt{1+\big[\big(1/2+\varphi_1(x_1)-x_2\big)/c_2\big]^{1/\alpha}}\,\big\}^2\,dx_2.$$

Accordingly, the expression on the second line on page 1827 should be modified: it should be multiplied by 2 and the term $8b_1^2\int\varphi_1(x_1)\,dx_1$ should be added which is of the order $O(M^{-\gamma(1+2\alpha^{-1})-1})$. On page 1826, line -6, and on page 1827, line -4, the power n should be replaced by $2n$.