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CORRECTION THE PROBABILITIES OF LARGE DEVIATIONS FOR A CERTAIN CLASS OF STATISTICS ASSOCIATED WITH MULTINOMIAL DISTRIBUTIONS

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There are misprints in the statements of Theorem 2.1 and 2.2 of the article.

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In the relations (2.7) and (2.8) it must be written $R_N(\eta)$ instead of R_N, and $O\left(\frac{1+x_N}{\sqrt{N}}\right)$ instead of $o\left(\frac{1+x_N}{\sqrt{N}}\right)$.

The initial sentence of condition (ii) of Theorem 2.2 was omitted. The corrected variant is

Theorem 2.2. Let $n \to \infty$, $N \to \infty$, $p_{\max} \to 0$ and the functions $h_m(\,\cdot\,)$ be non-negative. If
(i) For each integer $s \in [3\ ,\ k_n]$ there exist non-negative a_1, a_2 and b_1, b_2 such that

$$E\left((\xi_m - np_m)^2 h_m^s(\xi_m)\right) = O\left(s^a (np_m)^b E h_m^s(\xi_m)\right), \tag{2.9}$$

where $a = a_1$, $b = b_1$ for all $m \in \mathcal{N} \subseteq (1, 2, \ldots, N)$, and $a = a_2$, $b = b_2$ for all $m \in (1, 2, \ldots, N) \backslash \mathcal{N}$, and

$$k_n = o\left(\min(p_{\max}^{-1}, K_n(a_1, b_1), K_n(a_2, b_2))\right), \tag{2.10}$$

(ii) For each integer $s \in [3,\ k_n]$ there exists $\omega_m^2 > 0$ and a sequence of positive numbers V_n such that for some $\nu \geq 1$

$$|\mathcal{C}_s(h_m(\xi_m))| \leq (s!)^{1+\nu} V_n^{s-2} \omega_m^2\ ,\ m = 1, \ldots, N, \tag{2.11}$$

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then for all x_N such that

$$0 \le x_N = o\left(\min\left(W_N^{1/(1+2\nu)}, k_n^{1/2}\right)\right), \tag{2.12}$$

where $W_N = V_n^{-1}\sigma_N \min(1,\sigma_N^2/\widetilde{\omega}_N^2)$, $\widetilde{\omega}_N^2 = \omega_1^2 + ... + \omega_N^2$, it holds

$$P\left\{R_N(\eta) > x_N\sigma_N + A_N\right\} = (1-\Phi(x_N))\left(1 + O\left((x_N+1)W_N^{-1/(1+2\nu)}\right)\right), \tag{2.13}$$

and

$$P\left\{R_N(\eta) < -x_N\sigma_N + A_N\right\} = \Phi(-x_N)\left(1 + O\left((x_N+1)W_N^{-1/(1+2\nu)}\right)\right). \tag{2.14}$$

At last, Corollary 3.6 should be read as Theorem 3.6, proof of which follows from Theorem 2.2 alike to proofs of Theorems 3.5 and 3.7.