Errata: Encores on cores

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In Corollary 2, $np_{2\hat{M}/\hat{N},k,j}$ should be $\hat{N}p_{2\hat{M}/\hat{N},k,j}$.

In Corollary 3 and Theorem 3, $np_{\tilde{c},k,j}$ should be $ne^{-\mu}\mu^j/j!$, where $\mu = \mu_{k,c}$ in Corollary 3, and $\mu = \mu_{d,k,c}$ in Theorem 3. The proofs remain unchanged.

With these corrections, the results read as follows.

Corollary 2 *Fix $j \geq k \geq 2$, and let $m = m(n) \sim cn/2$ where $c > c_k$ is fixed. Let $\hat{N}$ and $\hat{M}$ be the (random) numbers of vertices and edges of $\mathcal{K}(n,m,k)$, and let Y_j be the number of vertices having degree j. Then for sufficiently small $\epsilon > 0$, conditional upon $\hat{M} - k\hat{N} > \epsilon n$ and $\hat{N} > \epsilon n$, we have*

$$\mathbf{P}\left(|Y_j - \hat{N}p_{2\hat{M}/\hat{N},k,j}| > a\sqrt{\hat{N}}\right) = O(\sqrt{n})e^{-2a^2}$$

for all $a > 0$, where, with λ_b as in (4),

$$p_{b,k,j} = \frac{\lambda_b^j}{j!f_k(\lambda_b)}. \tag{5}$$

Corollary 3 *Fix $j \geq k \geq 2$, and let $m = m(n) \sim cn/2$ where $c > c_k$. The number of vertices of degree j in $\mathcal{K}(n,m,k)$ is a.a.s. $ne^{-\mu}\mu^j/j! + o(n)$, where $\mu = \mu_{k,c}$.*

Theorem 3 *Let $c > 0$ and integers $d \geq 3$, $k \geq 2$ be fixed. Suppose that $m \sim cn/d$, and $G \in \mathcal{G}(d,n,m)$. For $c < c_{d,k}$, G has empty k-core a.a.s. For $c > c_{d,k}$, the k-core of G a.a.s. has $e^{-\mu_{d,k,c}}f_k(\mu_{d,k,c})n(1+o(1))$ vertices and $\frac{1}{d}\mu_{d,k,c}e^{-\mu_{d,k,c}}f_{k-1}(\mu_{d,k,c})n(1+o(1))$ hyperedges. Moreover, let $j \geq k$ be fixed, and assume $c > c_{d,k}$. Then the number of vertices of degree j in $\mathcal{K}(d,n,m,k)$ is a.a.s. $ne^{-\mu}\mu^j/j! + o(n)$, where $\mu = \mu_{d,k,c}$.*