The Annals of Statistics
1994, Vol. 22, No. 3, 1633–1634

CORRECTION

DISTRIBUTION FUNCTIONS OF MEANS OF A DIRICHLET PROCESS

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The Annals of Statistics (1990) **18** 429–442

There is an error in Theorem 1 of our paper. The problem is that the condition $A(\tau) \in [0, 1)$ does not imply the expression of $\mathcal{M}$ stated in part (ii) of Theorem 1, page 436. In fact, such an expression holds under the further hypothesis that A has no jump with size greater than or equal to 1. On the other hand the expression stated in part (i) of the same theorem is true even if $A(\tau) \in [0, 1)$, provided that $\alpha^* > 1$. The one and only case previously not considered [i.e., $\alpha^* > 1$ and $S(\alpha) = -\infty$] is covered by part (iii) of the following proposition, which represents a correct complete reformulation of the aforementioned Theorem 1.

THEOREM 1. *Let χ be a random probability measure chosen by a Dirichlet process on $(\mathbb{R}, \mathfrak{B})$ with parameter α, and satisfying*

$$P\left(\int_{\mathbb{R}} |x|\chi(dx) < +\infty\right) = 1.$$

Write $\mathcal{M}$ for the probability distribution function of $Y = \int_{\mathbb{R}} x\chi(dx)$, $S(\alpha)$ for the support of α, $A(\cdot)$ for the corresponding distribution function and α^* for $\alpha(\mathbb{R})$. Then if α is degenerate at ξ, $\mathcal{M}$ is also degenerate at the same point. On the other hand, if α is not degenerate, we obtain the following:

(i) *For* $\inf S(\alpha) = \tau > -\infty$ *and* $\alpha^* > 1$,

$$\mathcal{M}(x) = \begin{cases} 0, & \text{if } x < r, \\ \displaystyle\int_\tau^x \frac{2^{\alpha^*-3}(\alpha^*-1)}{\pi(u-\tau)}\,du \\ \displaystyle\quad\times \int_{-\pi}^{\pi} \left\{\cos\left(\frac{y}{2}\right)\right\}^{\alpha^*-2} \cos\left\{\int_\tau^\infty q(v;u,y)(u-\tau)\sin y\,dv - \frac{\alpha^* y}{2}\right\} \\ \displaystyle\quad\times \exp\left\{-\int_\tau^\infty q(v;u,y)\big[(u-\tau)\cos y + v - \tau\big]dv\right\}dy, & \text{if } x \geq \tau, \end{cases}$$

where

$$q(v;u,y) = \frac{\alpha^* - A(v)}{(u-\tau)^2 + (v-\tau)^2 + 2(v-\tau)(u-\tau)\cos y}.$$

Received July 1993; revised January 1994.