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CORRECTION

Finlay, R. and Seneta, E. (2006). Stationary-increment Student and variance-gamma processes. *J. Appl. Prob.* **43,** 441–453.

The process

$$\frac{1}{n^{1-\gamma}}(T_{\lfloor nt \rfloor} - \lfloor nt \rfloor) = \frac{1}{n^{1-\gamma}} \sum_{s=1}^{\lfloor nt \rfloor} (G(\psi_\nu(s)) - 1)$$

as $n \to \infty$ was considered by Heyde and Leonenko (2005) and in the above paper, where, respectively, $G(x) = G^{\mathrm{R}\Gamma}(x) = (\nu/2 - 1)/x$ and $G(x) = G^{\Gamma}(x) = (2/\nu)x$. In both cases, $2\psi_\nu(t) \sim \chi_\nu^2$ for each t.

The modified Laguerre expansion of $G^{\mathrm{R}\Gamma}(x)$ that is used has the first two terms 1 and $1 - (2/\nu)x$, followed by additional terms, whereas the modified Laguerre expansion of $G^{\Gamma}(x)$ consists of two summands, 1 and $(2/\nu)x - 1$, only. Thus,

$$G^{\mathrm{R}\Gamma}(\psi_\nu(t)) - 1 = 1 - \frac{2}{\nu}\psi_\nu(t) + E_t,$$

where E_t consists of higher-order terms which, as was shown in Heyde and Leonenko (2005, Section 5.1), become asymptotically negligible, while

$$G^{\Gamma}(\psi_\nu(t)) - 1 = \frac{2}{\nu}\psi_\nu(t) - 1.$$

Hence, the weak limit as $n \to \infty$ in the RΓ (reciprocal gamma) case is the process $-(1/\nu)\sum_{i=1}^{\nu} R_i(t)$ and the weak limit as $n \to \infty$ in the Γ (gamma) case is the process $(1/\nu)\sum_{i=1}^{\nu} R_i(t)$.

The distribution of the random variate $R(t)$ is not in fact symmetric, as claimed in the last two paragraphs on page 450 of the above paper, so the two limit processes in the RΓ and Γ cases are not in fact distributionally equivalent, as claimed there.

References

Heyde, C. C. and Leonenko, N. N. (2005). Student processes. *Adv. Appl. Prob.* **37,** 342–365.