NON-EXISTENCE OF SOME UNSYMMETRICAL PARTIALLY BALANCED INCOMPLETE BLOCK DESIGNS: CORRIGENDUM

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Theorem 4.1 (ii) (b) should read:

"*if* $m \equiv 3 \pmod 4$ *and* $n \equiv 2 \pmod 4$, *then the only odd primes contained in the square-free part of* n *are congruent to* 1 *modulo* 4."

In the above paper, Theorem 4.1 (ii) (b) as stated implied that if $m \equiv 3 \pmod 4$ and $n \equiv 2 \pmod 4$, then the square-free part of n contained only odd primes congruent to 1 modulo 4. This led to the erroneous proof of the impossibility of a balanced incomplete block design with parameters $v = b = 111$, $r = k = 11$, $\lambda = 1$ and $v = 100$, $b = 110$, $r = 11$, $k = 10$, $\lambda = 1$ given by Clatworthy [**1**].

We wish to express our thanks to J. F. Lawless for pointing out (written communication) that similar corrections are necessary in subparts (i) (b), (ii) (a) and (ii) (c) of the same theorem. Thus we have the following changes.

Theorem 4.1 (i) (b) should read:

"*if* $m \equiv 2 \pmod 4$ *and* n *is even, then the only odd primes contained in the square-free part of* $n\theta_2$ *are congruent to* 1 *modulo* 4".

Theorem 4.1 (ii) (a) should read:

"*if* $m \equiv 1 \pmod 4$ *and* $n \equiv 2 \pmod 4$, *then the only odd primes contained in the square-free part of* θ_2 *are congruent to* 1 *modulo* 4".

Theorem 4.1 (ii) (c) should read:

"*if* $m \equiv 3 \pmod 4$ *and* $n \equiv 0 \pmod 4$, *then the only odd primes contained in the square-free part of* $n\theta_2$ *are congruent to* 1 *modulo* 4".

Reference

1. W. H. Clatworthy, *The subclass of balanced incomplete block designs with* $r = 11$ *replications*, Rev. Inst. Internat. Statist. *36* (1968), 7–11.

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