ERRATUM TO THE MAHONIAN PROBABILITY DISTRIBUTION ON WORDS IS ASYMPTOTICALLY NORMAL

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The number of inversions $M_{a_1,\dots,a_m}$ in a word studied in our paper [1] is a well-known quantity in statistics. It is equivalent to the test statistics by Jonckheere [3] and Terpstra [6] and it can be seen as a case of Kendall's τ with ties; the two-letter case is the Mann–Whitney test statistic [4]. The asymptotic normality is also well-known; the two-letter case was shown already by Mann and Whitney [4], and a proof that applies in the same generality as our Theorem 1.2 (allowing an unbounded number of letters) is given by Diaconis [2, p. 128–129]. For the two-letter case, Takács [5] gave a local limit theorem, with more restrictive conditions than ours but with an explicit error bound.

References

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