

# On a two-color generalized Pólya urn

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## Abstract

We consider a two-color generalized Pólya urn whose composition is reinforced, whenever the urn is sampled, with a random number of balls of the same color as that of the ball extracted. The infinite sequence of colors generated by the urn is not weakly stationary, but is asymptotically exchangeable; we prove a strong law of large number and we propose approximations for the distribution of the limit.

**Keywords:** Generalized Pólya urn, random walks with reinforcement, asymptotic exchangeability.

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