A nonparametric point estimation technique using the *m*-out-of-*n* bootstrap

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We investigate a method which can be used to improve an existing point estimator by a modification of the estimator and by using the *m*-out-of-*n* bootstrap. The estimation method used, known as bootstrap robust aggregating (or BRAGGing) in the literature, will be applied in general to the estimators that satisfy the smooth function model (for example, a mean, a variance, a ratio of means or variances, or a correlation coefficient), and then specifically to an estimator for the population mean. BRAGGing estimators based on both a naive and corrected version of the *m*-out-of-*n* bootstrap will be considered. We conclude with proposed data-based choices of the resample size, *m*, as well as Monte-Carlo studies illustrating the performance of the estimators when estimating the population mean for various distributions.