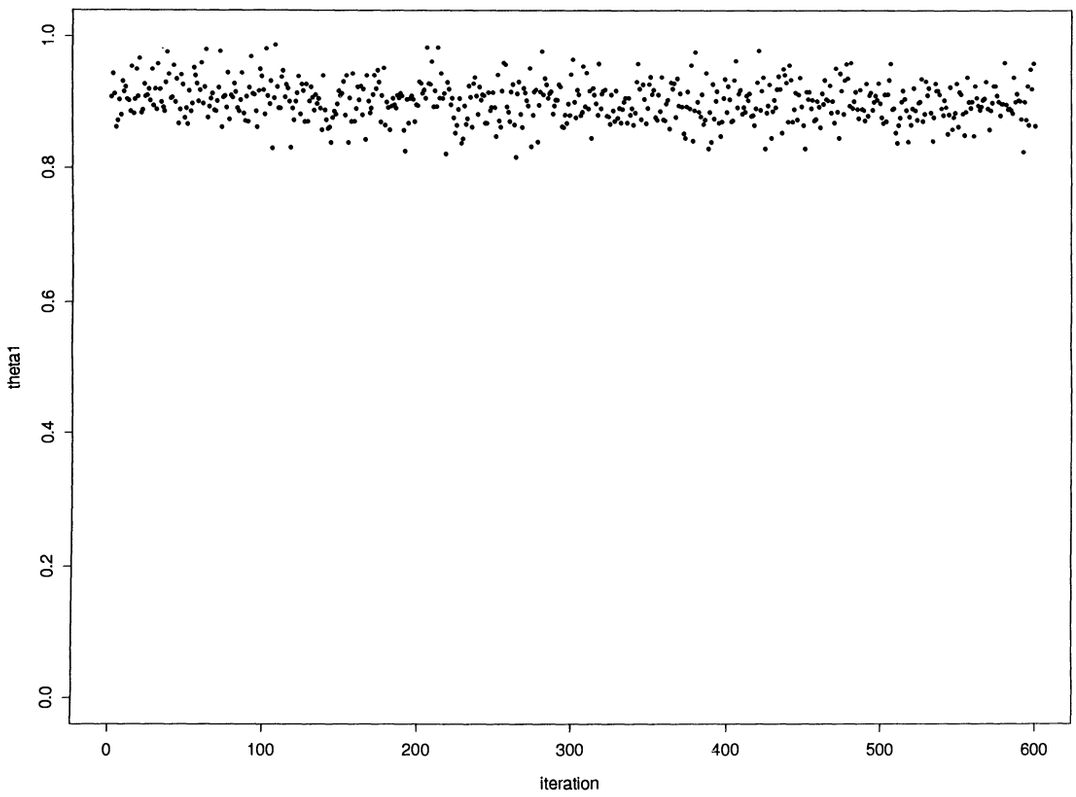


FIG. 3. $\theta_1$ *versus iteration.*

the importance weights can yield valuable information about the convergence of the Markov chain. Further experience with this Gibbs Stopper method is warranted. Also of value would be analytical expressions that quantify the probability of outlier detection for important classes of problems.

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# Comment

**Alan E. Gelfand**

As noted by Gelman and Rubin, the problem of creating a simulation mechanism is clearly separate from the problem of using this mechanism to draw inference. Moreover, for the former problem, as observed in Green and Han (1992), the objectives of rapid convergence and good estimation performance are distinct. Translating these objectives to the latter problem, it appears that Gelman and Rubin focus on diagnosis of convergence, whereas Geyer focuses on assessing estimation performance. Again, these enterprises are not identical, accounting in part for the authors' differing views.

The two papers share a common thread in that, regardless of whether single or multiple trajectories are used, the state space of the Markov chain at each iteration is reduced to a univariate observation with trajectories thus treated as univariate time series. Though the authors' proposals can be carried out for any univariate reduction of interest, the thrust of my comments is the suggestion that, at least in certain

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