Tikochinsky, Tishby, and Levine Respond: We are using the evidence [Eq. (1) in the space of a single experiment or Eq. (8) in the space of repeated experiments] to set up a *probability model.* That is, we employ the constraints to assign *definite numerical values* to the probabilities (p_i and $P_{\mathbf{N}}$, respectively) and *not* to infer a prior (i.e., Bayesian) probability density [$f(\{p_i\})$ or $f(\{p_{\mathbf{N}}\})$, respectively] for the unknown probabilities. The use of the multinomial distribution for N independent repetitions of the single experiment is therefore justified. Whatever additional evidence can be gathered during an actual repetition of a single experiment is not part of the given evidence and cannot be used to infer $P_{\mathbf{N}}$.

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