LETTER TO THE EDITOR

Editor: In the Spring 2009 issue of *JSE,* Douglas Stokes commented on a paper I coauthored with Lund, Emoto and Kizu that was published in the Winter 2008 issue. That paper described an experiment involving the effects of distant intention on the formation of frozen water crystals. Stokes' critique was that multiple drops of water were drawn from the same bottles, and thus those samples could not be considered statistically independent. From this, he suggested that the bottle rather than the water sample should be treated as the unit of analysis, and because there were only six bottles used in the experiment, the best possible significance level attainable would be 0.167, whereas we had reported $p = 0.03$.

The question of independence, in this context, is primarily concerned with assumptions about differences in water samples taken from different bottles. If each bottle came from a different source, say Evian, Perrier, Fiji, etc., then variations in mineral concentrations from one brand to the next might well result in some bottles inherently producing more attractive crystals than others. And thus statistical comparisons based on the assumption that the underlying water samples were the same would be invalid.

We were aware of this potential problem, so in the experiment we used six bottles of water from the same brand (Fiji). Those bottles were bound together in a single package, and they were all part of the same bottling run. This means the six bottles we used were filled with water from the same source, all within a matter of seconds, and subjected to the same environmental conditions from the moment of bottling to arriving at our lab. Once in the lab, we took care to handle each bottle the same way, and after "exposure" to distant intentions we repackaged the bottles again, where they remained bound together until they reached the lab in Tokyo. In this way, rather than using three hundred 10-ml bottles filled from a single source of water, for convenience we used six 500-ml bottles filled from the same source.

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