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Dear Editor,

Please consider our manuscript entitled “Signal detection theory with ambivalent or missing responses” for publication in *Behavior Research Methods*.

Signal detection theory (SDT) provides methods for transforming raw data into psychologically meaningful measures of sensitivity and bias. However, regular SDT models require subjects to make affirmative responses (e.g., “yes” or “no”) to each trial in an experiment. Here, we propose modifications to the regular SDT models that allow sensitivity and bias to be calculated when there are ambivalent responses (“I don’t know”) or missing responses in the experiment. These methods may be particularly useful for future functional neuroimaging studies, where it is often necessary to control the time intervals between trials, and consequently it cannot be ensured that subjects will respond to each trial. We believe that our paper will make a useful addition to your journal.

The material presented in this manuscript is original research, has not been published previously, and has not been submitted for publication elsewhere.

Sincerely,

Samuel R. Mathias, PhD