Response to James Allan Matte Letter to the Editor

Raymond Nelson

Appendix P in Nelson and Handler (2015) is calculated from the statistics published on page 98 in Matte and Reuss (1989), which recommends cut-scores of -5 and +3 per chart and includes an instruction to average the scores for all charts. We know of no peer-reviewed publication that recommends the use of any other distribution or cutscores. Mr. Matte´s suggested cutscores for 2, 3 and 4 charts are simply multiples of these cutscores - disregarding that standard deviations are not subject to linear addition and multiplication. Instead of attempting to rectify Mr. Matte´s statistical and scientific inconsistencies we elected to republish his recommendations. Our concerns about methodological issues were included in footnotes.

Mr. Matte´s citation of a self-publication cannot be taken to re-define how scientific research and statistical analysis actually work. In particular, Mr. Matte´s assertions about sampling and generalizability are wrong. Sample size does *not* affect the generalizability of scientific conclusions; sampling method does. Sample size *does* affect statistical power – the ability to find a significant effect – and this will be important when investigating small effect sizes. Polygraph research is commonly seeking large effect sizes - large improvements over chance - for which smaller sampling sizes are often adequate. It is not surprising that Mr. Matte´s research sample, consisting of examinations conducted or supervised by himself (using his eponymously named technique), included no error cases and ~100% classification accuracy. We hypothesize that reliance on confessions as a sampling method may have systematically excluded both false-positive and false-negative error cases, for which a confession is not likely to be obtained, from the reported study samples.

If Mr. Matte is correct in his conclusion of ~100% accuracy, then the problem of perfect lie detection has been solved. No further research is necessary, and there is nothing more we need to learn. If Mr. Matte is incorrect, if ~100% polygraph accuracy cannot be achieved by most examiners, most of the time, with most examinees, then Mr. Matte´s conclusions would appear to tell us little, if anything, about what to expect in reality.

We thank Mr. Matte for letting us know his feelings, but we remain in disagreement with his assertions and conclusions. We apologize for subjecting the readership to another round of argument and controversy in a matter for which there will be no benefit to the profession.