MBS 93-19 Measuring Memory Factors in Monitoring: Reply to Kinchla William Batchelder, David Riefer, Xiangen Hu

Kinchla has criticized Batchelder and Riefer's multinomial model for source monitoring, primarily its highthreshold assumptions, and he advocates an approach based on Signal Detection Theory (SDT). In this reply, we lay out some of the considerations that led to our model, and we then raise some specific concerns with Kinchla's critique. We point out that most of his criticisms are drawn from contrasting the high threshold and the Gaussian, equal-variance SDT models on yes-no recognition memory. We indicate how source monitoring is more complicated than simple yes-no recognition, and we questions the validity of standard ROC analyses in source monitoring. We argue that our model is a good approximation for measuring differences between sources on old-new detection, and that it has the advantages of allowing goodness-of-fit tests for several submodels and the ability to measure source discrimination, as well as detection. We also explore a low-threshold multinomial model and show that it yields conclusions very similarly to our original model when applied to the same data. Finally, we examine some possibilities for applying SDT models to source monitoring and indicate directions that seem productive for future work.