- Friedman, M. P., & Carterette, E. C. Detection of Markovian sequences of signals. *J. Acoust. Soc. Amer.*, 1964, 36, 2334-2339.
- Friedman, M. P., Carterette, E. C., Nakatani, L. H., & Ahumada, A. Feedback and frequency variables in signal detection. Technical Report No. 30, Human Communication Laboratory, Department of Psychology, UCLA, 1968.
- Green, D. M., & Swets, J. A. *Signal detection theory and psychophysics*. New York: Wiley, 1966.
- Gundy, R. Auditory detection of an unspecified signal. *J. Acoust. Soc. Amer.*, 1961, 33, 1008-1012.
- Kinchla, R. A. A learning factor in visual discrimination. In R. Atkinson (Ed.), *Studies in mathematical psychology*. Stanford: Stanford University Press, 1963. Pp. 233-249.
- Luce, R. D. A threshold theory for simple detection experiments. *Psychol. Rev.*, 1963, 70, 61-79.
- Markowitz, J., & Swets, J. A. Factors affecting the slope of empirical ROC curves: Comparison of binary and rating responses. *Percept. & Psychophys.*, 1967, 2, 91-100.
- Norman, D. A. Sensory thresholds, response biases, and the neural quantum theory. *J. math. Psychol.*, 1964, 1, 88-120.
- Parducci, A., & Sandusky, A. Distribution and sequence effects in judgment. *J. exp. Psychol.*, 1965, 89, 450-459.
- Ronken, D. A. A note on some alternative models for response bias changes during forced-choice detection experiments. *Brit. J. math. & statist. Psychol.*, 1966, 19, 33-38.
- Sklansky, J. Markov chain model of adaptive signal detection. *Proceedings of the 1963 Biometrics Symposium*. Air Force Systems Command, Wright Patterson A. F. B., Ohio, March, 1963.
- Swets, J. A., & Sewall, S. The invariance of signal detectability over stages of practice and levels of motivation. *J. exp. Psychol.*, 1963, 66, 120-126.

Notes

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2. Ahumada is now at the University of California, Irvine. He was a National Science Foundation Predoctoral Fellow when this work was done. Nakatani is a Predoctoral Fellow of the United States Public Health Service.
3. Ronken (1966) has suggested an alternative interpretation of Atkinson and Kinchla's results using a model which combines the assumptions of the Information and Reinforcement models.

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Comment on "Saturation estimates and chromatic adaptation" by Gerald H. Jacobs by Leo M. Hurvich and Dorothea Jameson University of Pennsylvania

We were pleased to see Dr. Jacobs' paper (1967) reporting experimental results for scales of spectral saturation that show "a rather striking correspondence" to our own theoretical predictions for the dependence of saturation on chromatic adaptation (Jameson & Hurvich, 1956).

Dr. Jacobs' statement that "there apparently have been no direct experimental measurements of spectral saturation under chromatic adaptation," (p. 274) overlooks an experimental study of this problem that we published in the *Journal of the Optical Society of America* in 1959 (Jameson & Hurvich, 1959). Our study utilized a percentage magnitude estimate to scale spectral saturation in a centrally fixated test field within 37° surrounds of two different chromaticities. Spectral saturation was scaled when the luminance of the test stimuli was equated to that of the adapting field, as in the Jacobs study, and also when the test luminance differed from that of the surround. We call attention to these 1959 data

not only for the sake of completeness, but more importantly, because they also demonstrate experimentally the significance of the test luminance level relative to the level of the adapting illumination in determining the specific form of the spectral saturation function for any given chromatic adaptation. Our earlier theoretical treatment has been extended to include these intensity dependent effects (1962).

References

- Jacobs, G. H. Saturation estimates and chromatic adaptation. *Percept. & Psychophys.*, 1967, 2, 271-274.
- Jameson, D., & Hurvich, L. M. Some quantitative aspects of an opponent-colors theory. III. Changes in brightness, saturation, and hue with chromatic adaptation. *J. Opt. Soc. Amer.*, 1956, 46, 405-415.
- Jameson, D., & Hurvich, L. M. Perceived color and its dependence on focal, surrounding, and preceding stimulus variables. *J. Opt. Soc. Amer.*, 1959, 49, 890-898.
- Jameson, D., & Hurvich, L. M. Theory of brightness and color contrast in human vision. *Vis. Res.*, 1964, 4, 135-154.