

PUBLICATIONS, REPORTS, PRESENTATION and POSTERS

Donald H. Mershon

as of February 2013

MAJOR RESEARCH PUBLICATIONS

Gogel, W. C., & Mershon, D. H. (1968). The perception of size in a distorted room. *Perception & Psychophysics*, 4, 26-28.

Mershon, D. H. (December, 1968). Manipulation of sensitivity in the peripheral visual field through differential signal probability and payoff. Unpublished M.A. Research Report, Department of Psychology, University of California, Santa Barbara.

Gogel, W. C., & Mershon, D. H. (1969). Depth adjacency in simultaneous contrast. *Perception & Psychophysics*, 5, 13-17.

Mershon, D. H., & Gogel, W. C. (1970). Effect of stereoscopic cues on perceived whiteness. *American Journal of Psychology*, 83, 55-67.

Mershon, D. H. (1970). Relative contributions of depth and directional adjacency to whiteness contrast under two conditions of luminance. Unpublished doctoral dissertation, University of California, Santa Barbara. (University Microfilms, Ann Arbor, No. 72-2953).

Mershon, D. H. (1971). Evidence for the relationship of depth adjacency to contrast. A response to Lie. *Scandinavian Journal of Psychology*, 12, 295-302.

Mershon, D. H. (1972). Relative contributions of depth and directional adjacency to simultaneous whiteness contrast. *Vision Research*, 12, 969-979.

Mershon, D. H., & Gogel, W. C. (1975). Failure of familiar size to determine a metric for visually perceived distance. *Perception & Psychophysics*, 17, 101-106.

Mershon, D. H., & King, L. E. (1975). Intensity and reverberation as factors in the auditory perception of egocentric distance. *Perception & Psychophysics*, 18, 409-415.

Mershon, D. H., Vancannon, M. G., & Windes, W. R. (1976). Scalar perceptions of distance for a monocularly determined depth interval. *Bulletin of the Psychonomic Society*, 8, 341-342.

Mershon, D. H., & Lembo, V. L. (1977). Scalar perceptions of distance in simple binocular configurations. *American Journal of Psychology*, 90, 17-28.

Mershon, D. H., Kennedy, M., & Falacara, G. (1977). On the use of 'calibration equations' in perception research. *Perception*, 6, 299-311.

- Gogel, W. C., & Mershon, D. H. (1977). Local autonomy in visual space. *Scandinavian Journal of Psychology, 18*, 237-250.
- Mershon, D. H., & Bowers, J. N. (1979). Absolute and relative cues for the auditory perception of egocentric distance. *Perception, 8*, 311-322.
- Mershon, D. H., & Amerson, T. L., Jr. (1980). Stability of measures of the dark focus of accommodation. *Investigative Ophthalmology and Visual Science, 19*, 217-221.
- Mershon, D. H., Desaulniers, D. H., Amerson, T. L., Jr., & Kiefer, S. A. (1980). Visual capture in auditory distance perception: Proximity Image Effect reconsidered. *Journal of Auditory Research, 20*, 129-136.
- Mershon, D. H., Desaulniers, D., Kiefer, S. A., Amerson, T. L., Jr., & Mills, J. (1981). Perceived loudness and visually-determined auditory distance. *Perception, 10*, 531-543.
- Mershon, D. H., Granberry-Hager, S., Bartlett, K., & DeCamp, B. (1981). Scalar perceptions of distance in a multiobject binocular display. *Bulletin of the Psychonomic Society, 18*, 249-252.
- Mershon, D. H., & Lin, L.-J. (1987). Directional localization in high ambient noise with and without the use of hearing protectors. *Ergonomics, 30*, 1161-1173.
- Amerson, T. L., & Mershon, D. H. (1988). Time-of-day variations in oculomotor function: I. Tonic accommodation and tonic vergence. *Ophthalmic & Physiological Optics, 8*, 415-422.
- Mershon, D. H., Ballenger, W. L., Little, A. D., McMurtry, P. L., & Buchanan, J. L. (1989). Effects of room reflectance and background noise on perceived auditory distance. *Perception, 18*, 403-416.
- Mershon, D. H., & Hutson, W. E. (1991). Toward the indirect measurement of perceived auditory distance. *Bulletin of the Psychonomic Society, 29*, 109-112.
- Little, A. D., Mershon, D. H., & Cox, P. H. (1992). Spectral content as a cue to perceived auditory distance. *Perception, 21*, 405-416.
- Mershon, D. H., Jones, T. A., & Taylor, M. E. (1993). Organizational factors and the perception of motion in depth. *Perception & Psychophysics, 54*, 240-249.
- McGregor, R., Mershon, D. H., & Pastore, C. M. (1994). Perception, detection and diagnosis of appearance defects in fabrics. *Textile Research Journal, 64*, 584-591.

- Mershon, D. H. (1997). Phenomenal geometry and the measurement of perceived auditory distance. Chapter 13 in R. Gilkey and T. R. Anderson (Eds.), *Binaural and Spatial Hearing in Real and Virtual Environments*. Mahwah, NJ: Lawrence Erlbaum Assoc. Pp. 257-274.
- Young, K. R., Mershon, D. H., & Hicks, L. J. (2002). The Far-Anchor Effect: Errors in the perception of motion and implications for aviation safety. *Human Factors*, 44, 133-143.
- Philbeck, J. W., & Mershon, D. H. (2002). Knowledge about typical source output influences perceived auditory distance. *Journal of the Acoustical Society of America*, 111, 1980-1983.
- Min, Y-K., & Mershon, D. H. (2005). An adjacency effect in auditory distance perception. *Acta Acustica united with Acustica*, 91, 480-489.
- Mayer, C., M., Mershon, D. H., Lim, R., Chipley, M. R., and McAllister, D. F. (2006). Visual factors affecting touchdown point judgments during off-airport emergency landings. *International Journal of Aviation Psychology*, 16, 401-418

TECHNICAL REPORTS

- Mershon, D. H. (1997). Report on Perceptual Issues Raised by Statements of Eye Witnesses to the Crash of TWA Flight 800. Prepared for the National Transportation Safety Board, pursuant to the formal hearing.
- Mershon, D. H., Mayer, C. M., & McAlister, D. F. (2002). Visual factors affecting pilots' judgments of the position of the touchdown during emergency landings. Prepared for NASA-Ames as Final Technical Report on Research Grant NAG 2-1281 (covering period February 1999 - December 2001).

OTHER PUBLICATIONS

- Mershon, D. H., & Luginbuhl, J. E. R. (1977). Cognitive fear can modify daily behavior under conditions of high salience: A biting criticism of the Green-Waters hypothesis. *Worm Runner's Digest*, 19, 66-68. (Humor)
- Mershon, D. H. (1980). Additive (and subtractive) color mixtures with a single slide projector. *Teaching of Psychology*, 7, 183-184.
- Mershon, D. H. (1982). An inexpensive system for producing examinations with minimal typing and proofreading. *Teaching of Psychology*, 9, 108-109.
- Karn, K. & Mershon, D. H. (1984). Dark focus, dark vergence and subjective reports of visual fatigue during CRT display viewing. *Proceedings of the Human Factors Society*, (San Antonio, TX), p. 935-936.

- Hill, G. W., & Mershon, D. H. (1985). Age-related changes in distance judgments. *Proceedings of the Human Factors Society*, (Baltimore, MD), p. 711-714.
- McMurtry, P. L., & Mershon, D. H. (1985). Auditory distance judgments in noise, with and without hearing protection. *Proceedings of the Human Factors Society*, (Baltimore, MD), p. 811-813.
- Mershon, D. H., & Amerson, T. L., Jr. (1988). A seminal study of sunlight sneezing. *Journal of Irreproducible Results*, 34 (No. 1, Sept./Oct.), 21-23. (Humor)
- McGregor, R. M., Mershon, D. H., Pastore, C., Davis, H., & Timble, N. (1994). Fundamental and practical aspects of the perception and analysis of real and illusory appearance defects in fabrics. In *Annual Report of the National Textile Center* (Project 92-9). Washington, DC: US Dept. of Commerce. Pp. 249-257.
- Pennell, T. K., & Mershon, D. H. (1998). An unexpected variation of the Müller-Lyer illusion. *Visual Performances Technical Group Newsletter*, December. [Also reprinted in *COTG Digest*, 1999, 1 (No. 2, August), 9-11.]
- McAllister, D. F., Hogan, R. C., Morris, B. E., Mershon, D. H., Mayer, C. M., Lim, R., Holmes, M., & Tomlinson, J. (2001). Some problems encountered in the development of a virtual reality system for evaluating human performance during emergency power-off aircraft landings. IS&T/SPIE Electronic Imaging 2001, San Jose, CA, January. (SPIE proceedings Vol. 4297)
- Mayer, C. M., Mershon, D. H., Lim, R., McAllister, D. F., Matson, K., & Morris, B. E. (2001). Visual factors affecting pilots' judgments of trajectory-to-touchdown during emergency landings. *Proceedings of the Eleventh International Symposium on Aviation Psychology* (Columbus, OH), March.

ARTICLES IN PREPARATION

- Ornan, R. N., & Mershon, D. H. The effect of far-anchor illusions of motion-in-depth on judgments of time-to-contact.
- Mershon, D. H. Perceptual factors as a partial explanation for some so-called "unexplained" aerial phenomena (for general audiences).
- Mershon, D. H. Evaluating the role of perceptual error in eye-witness observations of distance, size and motion.

PRESENTATIONS and POSTERS

- Depth adjacency and whiteness contrast.
Bell Telephone Laboratories, Murray Hill, NJ, October, 1969.

Relative contributions of depth/directional adjacency to simultaneous contrast. Eastern Psychological Association, New York, NY, April, 1971.

Failure of familiar size to determine a metric for visually perceived distance. Psychonomic Society, St. Louis, MO., November, 1972.

Relative visual massiveness and perceived egocentric distance.
Psychonomic Society, Boston, MA, November, 1974.

Intensity and reverberation as factors in auditory perception of egocentric distance.
Psychonomic Society, Denver, CO, November, 1975.

Reverberation and specific distance tendency as factors in auditory distance.
Psychonomic Society, St. Louis, MO, November, 1976.

Perceived distance and loudness.
Psychonomic Society, Washington, DC, Nov., 1977.

The dependence of achromatic color perception on a three-dimensional world. Presented during a symposium entitled "Peripheral vs central determinants of apparent brightness: The death of a controversy," at annual meetings of the Eastern Psychological Association, Philadelphia, PA, April, 1979.

Time-of-day variations in the dark focus of accommodation.
Psychonomic Society, St. Louis, MO, November, 1980.

The third dimension of auditory space: Distance.
Invited colloquia presented at ---
California State Univ., L.A. (Psychology), March, 1981.
Univ. of Calif., Santa Barbara (Psychology), March, 1981.
Harvard Univ. (Laboratory of Psychophysics), April, 1981.

Effects of room reflectance and background on perceived auditory distance.
Psychonomic Society, Minneapolis, MN, November, 1982.

Toward the development of an indirect measure for perceived auditory distance.
Psychonomic Society, Atlanta, GA, November 1989.

3-D hearing: New directions in localization research.
NC Regional Chapter, Acoustical Society of America, Raleigh, NC, March 1990.

How far does a sound seem? The measurement of perceived auditory distance.
NC Regional Chapter, Acoustical Society of America, Salisbury, NC, Oct. 1991.

3-D hearing: Research on the perception of auditory distance.
Invited colloquia presented at ---
California State University, Los Angeles (Psychology), November, 1991.
University of California, Santa Barbara (Psychology), November, 1991.

Auditory perceived distance of familiar speech sounds.
Psychonomic Society, San Francisco, CA, November 1991.

Appearance defects in fabrics. (Poster)
(Poster presented with R. McGregor, C. Pastore, H. Davis, & M. Taylor). National Textile Center Research Forum, Auburn, AL, February 1993.

Phenomenal geometry and the measurement of perceived auditory distance.
Invited presentation at the Conference on Binaural and Spatial Hearing, Wright-Patterson AFB, Dayton, OH, September 9-12, 1993.

Perception, measurement and avoidance of appearance defects in fabrics. (Poster)
(Presented with R. McGregor, C. Pastore, H. Davis, N. Timble & M. Taylor). National Textile Center Research Forum, Greenville, SC, February 1994.

The indirect measurement of perceived auditory distance, or
How to learn the apparent distance of a sound without really asking.
Invited colloquia presented (during April 1996) at ---
Vanderbilt University
California State University, Los Angeles
University of California, Santa Barbara
University of California, Berkeley.

Interpreting Eyewitness Descriptions of Aircraft Accidents.
Invited colloquium, Franklin & Marshall College, Lancaster, PA, April 3, 2000.
International Society for Ecological Psychology, Clemson, SC, June 2000.
Joint Meeting of the NCSU Ergonomics Chapter and the Carolinas Chapter of the Human Factors and Ergonomics Society, Raleigh, NC, April 2001.

Mendat, C. C., Newman, S. E., & Mershon, D. H. (2002). (study of haptic vs visual discrimination of texture) Poster presented at the annual meeting of the Haptic Research Group, Kansas City, MO, November.

Mayer, C. M., Mershon, D. H., Lim, R., Chipley, M. R., & McAllister, D. F. (2003). Visual factors affecting pilots' judgments of the position of the touchdown point during emergency landings. Paper presented at International Society for Aviation Psychology.

Mershon, D. H., & Min, Y-K. (2003). An adjacency effect in auditory distance perception. Paper presented at the International Workshop on Spatial and Binaural Hearing, Utrecht, The Netherlands, June.