

CURRICULUM VITAE

MITCHELL STEVEN SOMMERS, Ph.D.

PERSONAL:

Mailing Address: Department of Psychology
Washington University
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Birthdate: July 15, 1960

Marital Status: Married

EDUCATION:

1. Georgetown University, Washington, D.C. 1978-1982
B.S. (Psychology)
2. University of Michigan, Ann Arbor, MI 1984-1990
Ph.D. (Psychology/Biopsychology)
Dissertation Co-Chairs: William C. Stebbins and David B. Moody
Title: Formant frequency discrimination by Japanese monkeys
3. Indiana University, Bloomington, IN 1990-1993
(NIH Postdoctoral Fellow: Training grant director Dr. David Pisoni)

ACADEMIC POSITION:

1993- 6/30/00	Assistant Professor Department of Psychology	Washington University
7/1/00- present	Associate Professor Department of Psychology	Washington University

Journal Articles (peer reviewed)

- Prosen, C.A., Moody, D.B., Stebbins, W.C., Smith, D.W., Sommers, M.S., Brown, J.N., Altschuler, R.A., & Hawkins, J.E. (1990). Apical hair cells and hearing. *Hearing Research*, 44, 179-193.
- Prosen, C.A., Moody, D.B., Sommers, M.S., & Stebbins, W.C. (1990). Frequency discrimination in the monkey. *Journal of the Acoustical Society of America*, 88, 2152-2161.
- Sommers, M.S., Moody, D.B., Prosen, C.A. & Stebbins, W.C. (1992). Formant frequency discrimination by Japanese macaques (*Macaca fuscata*). *Journal of the Acoustical Society of America*, 91, 3499-3510.
- Sommers, M.S. & Humes, L.E. (1993). Auditory filter shapes in normal-hearing, noise-masked normal-hearing, and elderly subjects. *Journal of the Acoustical Society of America*, 93, 2903-2914.
- Nygaard, L.C., Sommers, M.S., & Pisoni, D.B. (1994). Speech perception as a talker-contingent process. *Psychological Science*, 5, 42-46.
- Sommers, M.S., Nygaard, L.C., & Pisoni, D.B. (1994). Stimulus variability and the perception of spoken words: I. Effects of variations in speaking rate and absolute level. *Journal of the Acoustical Society of America*, 96, 1314-1324.
- Kirk, K.I., Pisoni, D.B., Sommers, M.S., Young, M., & Evanson, C. (1995). New directions for assessing speech perception in persons with sensory aids. *Annals of Otolaryngology, Rhinology, and Laryngology*, 107, 300-303.
- Nygaard, L.C., Sommers, M.S., & Pisoni, D.B. (1995). Effects of stimulus variability on the perception and representation of spoken words in memory. *Perception and Psychophysics*, 57, 989-1001.
- Sommers, M. S., & Kewley-Port, D. (1996). Modeling formant frequency discrimination of female vowels. *Journal of the Acoustical Society of America*, 99, 3770-3781.
- Sommers, M. S. (1996). The structural organization of the mental lexicon and its contributions to age-related declines in spoken word recognition. *Psychology and Aging*, 11, 333-341
- Sommers, M. S., Iler Kirk, K., & Pisoni, D.B. (1997). Some considerations in evaluating spoken word recognition in normal hearing, noise-masked normal hearing, and cochlear implant listeners. I: Effects of response format. *Ear and Hearing*, 18, 89-99.
- Sommers, M.S. (1997). Factors contributing to the speech perception difficulties of older adults: The importance of speech-specific cognitive abilities. *Journal of the American Geriatrics Association*, 11-17.
- Sommers, M.S. (1997). Stimulus variability and spoken word recognition. II: The effects of age and hearing impairment. *Journal of the Acoustical Society of America*, 101, 2278-2288.

- Sommers, M. S., & Gehr, S. E. (1998). Auditory frequency selectivity and suppression in younger and older adults. *Journal of the Acoustical Society of America*, 103, 1067-1075.
- Sommers, M. S. & Amano, S. (1998). Lexical competition in spoken word recognition by younger and older adults: A comparison of the rime cognate, neighborhood, and cohort. *Journal of the Acoustical Society of America*, 103, 2052-2055.
- Sommers, M.S. (1998). Spoken word recognition in individuals with dementia of the Alzheimer's type: Changes in talker normalization and lexical discrimination. *Psychology and Aging*, 13, 631-646.
- Sommers, M. S. & Lewis, B. R. (1999). Who really lives next door: Creating false memories with phonological neighbors. *Journal of Memory and Language*, 40, 83-108.
- Sommers, M. S. (1999). Perceptual specificity and implicit auditory priming in older and younger adults. *Journal of Experimental Psychology: Learning Memory and Cognition*, 25, 1236-1255
- Sommers, M.S. & Danielson, S. E. (1999). Inhibitory processes and spoken word recognition in young and older adults: The interaction of lexical competition and semantic context. *Psychology and Aging*, 14, 458-472.
- Gehr, S. E., & Sommers, M. S. (1999). Age differences in backward masking. *Journal of the Acoustical Society of America*, 106, 2793-2799.
- Yonan, C. A. & Sommers, M. S. (2000). Implicit and explicit effects of talker familiarity on spoken word recognition in older and younger adults. *Psychology and Aging*, 15, 88-99.
- Pilotti, M., Bergman, E. T., Gallo, D. A., Sommers, M. S., & Roediger, H. L. (2000). Direct comparison of auditory implicit memory tests. *Psychological Bulletin and Review*, 7, 347-353
- Pilotti, M., Balota, D., Sommers, M. S. & Kurdich, A. (2000). Auditory habituation in young and older adults. *Psychology and Aging*, 15, 313-322.
- Sommers, M. S., Tye-Murray, N., & Spehar, B. (2002). Auditory-visual integration in older and younger adults. *Seminars in Hearing*, 23, 85-97.
- Vitevitch, M. & Sommers, M. S. (2003). The facilitative influence of phonological similarity and neighborhood frequency in speech production in younger and older adults. *Memory & Cognition* 31, 491-504.
- Sommers, M. S. & Huff, L. (2004). Phonological false memories in older adults and individuals with dementia of the Alzheimer's type. *Psychology and Aging*, 791-806.

Spehar, B.A., Sommers, M. S., & Murray, N. (2004). Time-Compressed visual speech and age: A first report. *Ear and Hearing*, 25, 565-572.

Thomas, A. K. & Sommers, M. S. (2005). Attention to item-specific processing eliminates age effects in false memories. *Journal of Memory and Language*, 52, 71-86.

Sommers, M. S., Spehar, B. & Tye-Murray, N. (2005). Auditory visual speech perception and visual enhancement in normal-hearing younger and older adults. *Ear and Hearing*, 26, 263-275.

Barcroft, J. and Sommers, M. S. (2005). Acoustic variability and second language vocabulary learning. *Studies in Second Language Acquisition*, 27, 387-414.

Manuscripts in press

Tye-Murray, N., Sommers, M. S., & Spehar, B. A. (in press). Lipreading: Do women's and men's abilities change similarly with age? *Journal of Speech, Language, and Hearing Research*.

Manuscripts under review

Reed, L.M. & Sommers, M. S. (submitted). Blocked versus random presentation of list items has differential effects on phonological and semantic false memories.

Sommers, M.S. and Barcroft, J. (submitted). The effects of variability in voice type and fundamental frequency on spoken word recognition. *Journal of the Acoustical Society of America*.

Sommers, M. S. and Barcroft, J. (submitted). Encoding difficulty and second language vocabulary acquisition: Nasal versus normal voicetype. *Studies in Second Language Acquisition*.

Book Reviews

Sommers, M. S. (1997). The rise and (sometimes) fall of linguistic abilities. A review of Age differences in word and language processing, T. Bashore & P. Allen (Eds.). *Contemporary Psychology*, 42, 925-926.

Sommers, M. S. (2001). Review of auditory perception: A new analysis and synthesis, by R. M. Warren. *Volta Review*.

Book Chapters

Stebbins, W.C. & Sommers, M.S. (1992). Evolution, perception and the comparative method. In A. Popper, R. Fay, D.B. Webster (Eds.), *The evolutionary biology of hearing*, (Berlin: Springer-Verlag).

Sommers, M. S. (2005). Age-related changes in spoken word recognition. In D.B. Pisoni and R. E. Remez (Eds). *The Handbook of Speech Perception*. Blackwell, 469-493.

AWARDS:

1994 Washington University Eli Lilly Teaching Fellowship

1995 Selected Participant: National Institutes of Aging Summer Institute for Research on Aging. Summer 1995.

1998 Washington University Council of Students of Arts and Sciences Service Award.

2000 Washington University Council of Students of Arts and Sciences Service Award.

RESEARCH GRANTS AND FELLOWSHIPS:**Current and Past**

Missouri State Alzheimer's Association Cognitive declines and speech processing in normal aging and Alzheimer's disease Total direct costs \$20,000	1995-1996
Brookdale Foundation (Career Development Award) Auditory processing and speech perception in older adults Total direct costs: \$156,432	1995-1998
Washington University Faculty Research Grant Context effects in normal aging and DAT Total direct costs: \$5,000	1996-1997
National Institutes on Aging Pilot grant from Washington University Alzheimer's Disease Research Center Talker normalization for spoken words in normal aging and DAT Total direct costs: \$20,000	1996-1997
McDonnell Center for Higher Brain Function Auditory frequency and temporal resolution in older adults Total direct costs: \$30,000	1997-1998
National Institutes on Aging (R03 AG033009-01) Auditory suppression in older adults Total direct costs: \$30,000	1997-1998

Washington University Faculty Research Grant Psychoacoustic abilities and Alzheimer's disease Total direct costs: \$5,000	1999-2000
Brookdale Foundation Predictors of spoken word recognition in older adults and Alzheimer's patients Total direct costs: \$15,000	2000-2001
National Institutes of Health (R01 DC04338-01) Auditory-visual integration in older adults PI: Nancy Tye-Murray Co-PI: Mitchell S. Sommers Total direct costs: \$970,152	2000-2005
Department of Defense Voice-stress analysis as a measure of deception PI: Mitchell Sommers Total direct costs: \$165,421	2001-2003
National Institutes of Health Compressive non-linearity and Hearing aids PI: Julius Goldstein Co-PI: Mitchell Sommers Total direct costs: \$1,215,179	2001-2003
McDonnell Center for Higher Brain Function. Listening comprehension in older adults and DAT patients PI: Mitchell S. Sommers Total direct costs: \$40,0000	2003-2004
National Institutes of Health Listening comprehension across the adult lifespan PI: Sandra Hale Co-PI: Mitchell Sommers Total direct costs: \$1,250,000	2004-2008
<u>Pending</u>	
Department of Defense Acoustic features distinguishing deceptive from non-deceptive spoken utterances PI: Mitchell S. Sommers Total direct costs: \$515,000	2003-2005
National Science Foundation Stimulus variability and second language vocabulary acquisition PI: Mitchell S. Sommers Total direct costs: \$343,000	2004-2007

National Science Foundation 2005-2008
Research Education for Undergraduates
PI: Mitchell S. Sommers
Total direct costs: \$213,000

Fellowship for training

National Institutes on Aging 1998-1999
Individual Postdoctoral Award to Maura Pilotti
Faculty Sponsor: Mitchell S. Sommers

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

Acoustical Society of America
Association for Research in Otolaryngology
Psychonomic Society
American Psychological Society
American Psychological Association

PROFESSIONAL EXPERIENCE:

National Science Foundation – Linguistics Section Ad Hoc Reviewer

Acoustical Society of America
Member, Technical Committee on Speech Communication

Ad Hoc reviewer:

Journal of the Acoustical Society of America
Psychology and Aging
Ear and Hearing
Perception and Psychophysics
Psychonomic Bulletin and Review
Journal of Memory and Language
Journal of Speech, Language, and Hearing Research
Contemporary Psychology
Journal of Experimental Psychology: Human Perception and Performance

Program Committee:

American Psychological Society
American Speech, Hearing, and Language Association

DEPARTMENT/ UNIVERSITY SERVICE

Computer Committee Dept. of Psychology 1994-1997
Departmental Human Subjects Review Committee 1994-1997
Departmental Colloquium Organizer 1995-1997
Freshman Advising 1995-1999
Cognitive Search Committee 1996-1997

Research Director Search Committee, Central Institute for the Deaf	1996-1998
Institutional Review Board, Central Institute for the Deaf	1996-present
Social Psychology Search Committee	1997-1998
Undergraduate Curriculum Committee	1997-present
Departmental Subject Pool Committee	1997-present
Clinical Aging Search Committee	1998-1999
Arts and Sciences Curriculum Committee	2000-2001
Chair, Arts and Sciences Curriculum Committee	2001-2003
Member, Hilltop Human Studies Committee	2001-present
Member, Curriculum implementation committee	2001-2003
Chair, Washington University Center for Aging Curriculum Committee	2005- present

PRESENTATIONS AT NATIONAL MEETINGS:

Session Chair

Sommers, M. S. (1996). Models and mechanisms of vowel perception. Symposium presented at the 132nd meeting of the Acoustical Society of America.

Invited Presentations

Sommers (1997). The role of sensory and cognitive impairments in age-related speech perception deficits. S. Richard Silverman Lecture. Central Institute for the Deaf.

Sommers, M. S. (1998). Individual differences in the effects of stimulus variability and lexical difficulty in older adults and Alzheimer's patients. Paper presented at the 136th meeting of the Acoustical Society of America.

Sommers (1998). Factors affecting speech perception in Alzheimer's disease: The role audibility and cognitive impairment. Paper presented at the Annual meeting of the American Audiological Association.

Contributed Presentations

Sommers, M.S., Moody, D. B., & Stebbins, W.C. (1991). Formant frequency discrimination by Japanese monkeys. Paper presented at the 12th Midwinter meeting of the Association for Research in Otolaryngology.

Sommers, M.S., Nygaard, L. C., & Pisoni, D.B. (1992). The effects of speaking rate and amplitude variability on perceptual identification. Paper presented at the 123rd meeting of the Acoustical Society of America.

Sommers, M.S. & Humes, L.E. (1992). Auditory filter shapes in normal-hearing, noise-masked normal, and elderly subjects. Paper presented at the 123rd meeting of the Acoustical Society of America.

- Nygaard, L. C., Sommers, M. S., & Pisoni, D. B. (1992). The effects of rate and talker variability on the recall of spoken words. Paper presented at the 123rd meeting of the Acoustical Society of America.
- Sommers, M. S., Nygaard, L. C., & Pisoni, D. B. (1992). The effects of linguistically relevant and irrelevant acoustic variations on spoken word recognition. Paper presented at the 1992 International Conference on Spoken Language Processing.
- Sommers, M. S., Kirk, K. I., Pisoni, D. B., & Osberger, M. J. (1993). Some new directions in evaluating the speech perception abilities of cochlear implant patients: A preliminary report. Paper presented at the 1993 International Conference on Implantable Auditory Prostheses.
- Sommers, M. S. & Humes, L. E. (1993). The effects of speaking rate and stimulus variability on the perception of spoken words by young and elderly subjects. Paper presented at the 125th meeting of the Acoustical Society of America.
- Sommers, M. S. & Kewley-Port, D. (1993). Modeling formant frequency discrimination. Paper presented at the 125th meeting of the Acoustical Society of America.
- Nygaard, L.C., Sommers, M.S. & Pisoni, D. B. (1993). Speech perception as a talker-contingent process. Paper presented at the 125th meeting of the Acoustical Society of America.
- Sommers, M. S. (1994). The structural organization of the mental lexicon and its contribution to age-related declines in spoken word recognition. Paper presented at the 128th meeting of the Acoustical Society of America.
- Sommers, M. S. (1994). Stimulus variability and spoken word recognition: The effects of age and hearing impairment. Paper presented at the 128th meeting of the Acoustical Society of America.
- Sommers, M.S. (1995). Implications of age-related declines in talker normalization and lexical discrimination for assessment and treatment of speech perception deficits in older adults. Paper presented at the 17th Midwinter meeting of the Association for Research in Otolaryngology.
- Yonan, C. A. & Sommers (1995). Age differences in the effects of talker familiarity on spoken word recognition. Paper presented at the 130th meeting of the Acoustical Society of America.
- Prohofsky, R. S. & Sommers (1995). Closed-set formats: An evaluation within the framework of the Neighborhood Activation Model. Paper presented at the 130th meeting of the Acoustical Society of America.

- Sommers, M.S. (1996). Hearing aids and speech perception in older adults. Paper presented at the 49th Annual Meeting of the Gerontological Society of America.
- Sommers, M. S. & Danielson, S. E. (1996). Spoken word recognition in individuals with dementia of the Alzheimer's type: Paper presented at the 132nd meeting of the Acoustical Society of America.
- Sommers, M. S. & Danielson, S. E. (1997). The interaction of lexical competition and semantic context in spoken word recognition by younger and older adults. Paper presented at the 133rd meeting of the Acoustical Society of America.
- Sommers, M. S. & Amano, S. (1998). Lexical competition in spoken word recognition by younger and older adults: A comparison of the rime cognate, neighborhood, and cohort. Paper presented at the 135th meeting of the Acoustical Society of America.
- Gehr, S. E. & Sommers, M. S. (1998). The effects of age and hearing impairment on the time course of backward masking. Paper presented at the 136th meeting of the Acoustical Society of America.
- Sommers, M. S. (1998). Inhibitory control and age-related declines in spoken word recognition: Can older adults keep their neighbors quiet? Poster presented at the Seventh Cognitive Aging Conference.
- Sommers, M. S. (1999). Auditory-Visual integration across the lifespan. Paper presented at the 138th meeting of the Acoustical Society of America.
- Sommers, M. S. and Barcroft, J. (2002). Acoustic Variability and Second Language Vocabulary Learning. Presented at the 145th meeting of the Acoustical Society of America.
- Thomas, A. and Sommers, M.S. (2002). Implicit memory for non-presented items. Psychonomic Society.
- Sommers, M. S. and Tye-Murray, N. (2003). Visual enhancement for consonants, words, and sentences in older and younger adults. Presented at the 146th meeting of the Acoustical Society of America
- Ballou, M.R., & Sommers, M.S. (2004). Age differences in phonological false memories for non-words. Cognitive Aging Conference, Atlanta, GA.
- Sommers, M., Spehar, B., & Tye-Murray, N. (2004) Differential effects of speaking rate on auditory-only and visual-only speech perception. Cognitive Aging Conference, Atlanta, GA. Cognitive Aging Conference, Atlanta, GA.
- Weinberg, A., & Sommers, M.S. (2004) Are two ears better than one? Across channel integration of speech and music in younger and older adults. Cognitive Aging Conference, Atlanta, GA.

Barcroft, J. & Sommers, M.S. (2004). Stimulus variability and second language vocabulary acquisition. Mental Lexicon Conference, Ontario, Canada.

Sommers, M.S., Spehar, B. and Tye-Murray, N. (2004). Age-related changes in visual-only speech perception. Paper presented at the 145th meeting of the Acoustical Society of America, New York, November 2004.

Sommers, M. S. & Barcroft, J. (2004). Factors affecting acquisition of second language vocabulary. Paper presented at the 10th Mental Lexicon conference, Windsor, Ontario, August 2004.

Sommers, M.S., Tye-Murray, N. & Spehar, B. (2005). Auditory-visual speech perception by normal-hearing younger and older adults. Paper presented at the 146th meeting of the Acoustical Society of America, Vancouver May 2005.