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PAPERS, BOOKS, PUBLISHED OR IN PRESS

- Bellugi, U. & Klima, E.** (2001). Sign Language. In: N. Smelser & P. Baltes (eds.) *International Encyclopedia of the Social and Behavioral Sciences* (Vol.21, pp. 14066-71). Oxford, UK: Elsevier.
- Bellugi, U., Klima, E.S., & Hickok, G.H.** (2006). Brain organization: Clues from deaf signers with left and right hemisphere lesions. In L. Clara (Ed.), *Gesture and Word*. Lisbon, Portugal.
- Bellugi, U., Klima, E.S., & Hickok, G.** (2007). "Brain Organization for Sign Language", *Scholarpedia*, Under review.
- Brentari, D., **Bellugi, U., Klima, E. S., Pickell, H., & Hickock, G.**, (2007). Linguistic expression of motion events in deaf signers with focal lesions. *Under review*.
- Buchsbaum, B., Humphries, C., & **Hickok, G.** (2001). A new perspective on the functional anatomy of phonological working memory: fMRI investigations. *Cognitive Neuroscience Society Eighth Annual Meeting Program*, 87.
- Buchsbaum, B., **Pickell, B.**, Love, T., **Hatrak, M., Bellugi, U., & Hickok, G.** (2005). Neural substrates for verbal working memory in deaf signers: fMRI study and lesion case report. *Brain Lang*, 95(2), 265-272.
- Emmorey, K. & Lane, H.** (Eds.) (2000). *The signs of language revisited: An anthology to honor Ursula Bellugi and Edward Klima*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Emmorey, K.** (2002). Sign Language and the Brain. *Language, cognition, and the brain: Insights from sign language research*. (pp.271-314) Lawrence Erlbaum and Associates: Mahwah, NJ.
- Emmorey, K.** (2003). The neural systems underlying sign language. In M. Marschark & P. Spencer (Eds.). *The Handbook of Deaf Studies, Language, and Education*, pp. 361-375. Oxford University Press.
- Emmorey, K.** (Ed.) (2003). *Perspectives on classifier constructions in signed languages*. Mahwah, NJ: Lawrence Erlbaum and Associates.
- Emmorey, K., Damasio, H., McCullough, S., Grabowski, T., Ponto, L.L.B., Hichwa, R.D., & Bellugi, U.** (2002). Neural system underlying spatial language in American Sign Language. *NeuroImage*, 17(2): 812-824.
- Emmorey, K., Grabowski, T., McCullough, S., Damasio, H., Ponto, L., Hichwa, R., & Bellugi, U.** (2004). Motor-iconicity of sign language does not alter the neural systems underlying tool and action naming. *Brain and Language*, 89 (1), 27-37.
- Emmorey, K., Grabowski, T., McCullough, S., Damasio, H., Ponto, L.L., Hichwa, R.D., & Bellugi, U.** (2003). Neural systems underlying lexical retrieval for sign language. *Neuropsychologica*, 41 (1), 85-95.
- Emmorey, K., Grabowski, T., McCullough, S., Ponto, L., Hichwa, R., & Damasio, H.** (2005). The neural correlates of spatial language in English and American sign Language: A PET study with hearing bilinguals, *NeuroImage*, 24: 832-840.
- Finney, E.M., Clementz, B.A., **Hickok, G.** and Dobkins, K.R. (2003). Visual stimuli activate auditory cortex in the deaf: Evidence from MEG. *NeuroReport*, 14, 1425-1427.
- Hickok, G. & Buchsbaum, B.** (in press). Temporal lobe speech perception systems are part of the verbal working memory circuit: evidence from two recent fMRI studies. *Behavioral and Brain Sciences*.

- Hickok, G.** & Poeppel, D. (2004). Dorsal and ventral streams: A framework for understanding aspects of the functional anatomy of language. *Cognition*, 92, 67-99.
- Hickok, G.** & Poeppel, D. (Guest Eds.) (2004). Towards a New Functional Anatomy of Language. A Special Issue of *Cognition*. Vol. 92, 1-270.
- Hickok, G., & Bellugi, U.** (2001). The signs of aphasia. In F. Boller & J. Grafman (Series Eds.) & R.S. Berndt (Vol. Ed.), [CD-ROM] & *Handbook of neuropsychology: Vol. 3. Language and Aphasia* (2nd ed. pp. 31-50). Amsterdam, The Netherlands.
- Hickok, G., & Poeppel, D.** (2001). Understanding aphasia in the context of a new functional anatomic model of language. *Cognitive Neuroscience Society Eighth Annual Meeting Program*, 130.
- Hickok, G., Bellugi, U., & Klima, E.S.** (2001). Sign language in the brain. *Scientific American* 284 (6), 58-65.
- Hickok, G., Bellugi, U., & Klima, E.S.** (2002). Sign language in the brain. [Special Issue: The Hidden Mind]. *Scientific American*, 12 (1) 46-53.
- Hickok, G., Buchsbaum, B., Humphries, C., & Muftuler, T.** (2003). Auditory-motor interaction revealed by fMRI: Speech, music, and working memory in area SPT. *Journal of Cognitive Neuroscience*, 15, 673-682.
- Hickok, G., Love-Geffen, T., & Klima, E.S.** (2002). Role of the left hemisphere in sign language comprehension. *Brain and Language* 82, 167-178.
- Humphries, C., Love, T., Swinney, D., & **Hickok, G.** (2005). Response of anterior temporal cortex to syntactic and prosodic manipulations during sentence processing. *Human Brain Mapping*, 26, 128-138.
- Kassubek, J., **Hickok, G.**, & Erhard, P. (2004). Involvement of classical anterior and posterior language areas in sign language production, as investigated by 4 Tesla functional magnetic resonance imaging. *Neuroscience Letters*, 364, 168-172.
- Love, T., **Bellugi, U., Klima, E.S., & Hickok, G.** (2000). An fMRI study of sign language perception. [Abstract] *Cognitive Neuroscience Society Annual Meeting Program*, 127.
- Love, T., Buchsbaum, B., **Bellugi, U., & Hickok, G.** (2001). Neural basis of sentence comprehension in deaf signers: an fMRI investigation. *Cognitive Neuroscience Society Eighth Annual Meeting Program*, 157.
- McCullough, S., **Emmorey, K.**, & Sereno, M. (2005). Neural organization for the recognition of grammatical and emotional facial expressions in deaf ASL signers and hearing nonsigners. *Brain Research: Cognitive Brain Research*, 22 (2), 193-203.
- Okada, K., Smith, K.R., Humphries, C., & **Hickok, G.** (2003). Word Length Modulates Neural Activity in Auditory Cortex During Covert Object Naming. *NeuroReport*, 14, 2323-2326.
- Pickell, H., Klima, E., Bellugi, U., & Hickok, G.** (2007, under review). Neural dissociations in the production of lexical versus classifier signs in ASL: Distinct patterns of hemispheric asymmetry. *Brain and Language*.
- Pickell, H., Klima, E. Love, T., Kritchevsky, M., Bellugi, U. & Hickok, G.** (2005). Sign language aphasia following right hemisphere damage in a left-hander: A case of reversed cerebral dominance in a deaf signer? *Neurocase*, 11, 194-203.

RELATED ABSTRACTS

- Bellugi, U. & Klima, E.S. (2005). Language, Modality and the Brain. Invited Symposium, American Speech and Hearing Association, San Diego: CA [Poster/Abstract].
- Bellugi, U. & Klima, E.S. (2004). Brain Organization: Clues from sign aphasia. Abstract, *National Center for Research CNRS*, Rome, Italy.
- Bellugi, U. (2001) Keynote address: The neurobiology of language, Symposium on Brain and Behavior Relationships [Poster/Abstract], *American Speech Language and Hearing Association Annual Meeting*, New Orleans, LA.
- Bellugi, U. (2001) Language Development, Spatial Cognition and Underlying Neural Systems [Abstract], *Symposium on Language Development and Developmental Disorders*, organized by Dr. Judith Cooper, Bethesda, MD: National Institutes of Health.
- Bellugi, U. & Klima, E.S. (2005). Brain and language symposium: Sign Language Aphasia, Invited Public lecture, Abstract, Lisbon, Portugal.
- Buchsbaum, B.R., Hickok, G., Love, T., Pickell, P., Hatrak, M., & Bellugi, U. (2002). Phonological short-term memory in sign language: An fMRI study. [CD-ROM/Abstract View/Itinerary Planner] *Society for Neuroscience*, Washington, DC. 181.11.
- Emmorey, K., Damasio, H, McCullough, S., Grabowski, T., Ponto, L., Hichwa, R., & Bellugi, U. (2001). Neural systems underlying spatial language in American Sign Language [Abstract]. *Cognitive Neuroscience Society Annual Meeting Abstracts*.
- Emmorey, K., Grabowski, T., McCullough, S., Damasio, H., Ponto, L.L.B., Hichwa, R. & Bellugi, U. (2002). Neural systems underlying spatial language in English and American Sign Language: A PET study with hearing native signer [Abstract]. *Society for Neuroscience Annual Meeting*.
- Emmorey, K**, Xu, J., Gannon, P., Golden-Meadow, S., & Braun, A. Perception of pantomime, American Sign Language verbs, and nonsense signs by deaf signers and hearing non-signers. *Cognitive Neuroscience Society*, New York, May 5-8, 2007
- Finney, E.M., Cobb, S., Hickok, G., & Dobkins, KR. (2000). Differences between deaf and hearing subjects in visual processing: Evidence from MEG. *Society for Neuroscience Abstracts*, 26(1), 72.
- Gardner, C., Bettger, J., Bellugi, U., & Klima, E. (2002). The coordination of bimanual movements in American Sign Language [Poster/Abstract]. *Academy of Aphasia Annual Meeting*.
- Hickok, G. (2005). Towards a New Functional Anatomy of Language. American Speech and Hearing Association, Invited Keynote, San Diego, CA.
- Hickok, G., Love, T., Buchsbaum, B., & Bellugi, U. (2002). Neural basis of ASL sentence comprehension in deaf signers: An fMRI investigation [Poster/Abstract]. *Academy of Aphasia Annual Meeting*.
- Love, T., Bellugi, U., Klima, E.S., & Hickok, G. (2000). An fMRI study of sign language perception [Abstract]. *Cognitive Neuroscience Society Annual Meeting Abstracts*, 127.
- Love, T., Bellugi, U., Klima, E.S., & Hickok, G. (2002). A functional MRI study of the perception of ASL signs [Abstract]. *Academy of Aphasia Annual Meeting*.
- Love, T., Buchsbaum, B., Bellugi, U., & Hickok, G. (2001). Neural basis of sentence comprehension in deaf signers: an fMRI investigation [Poster/Abstract]. *Cognitive Neuroscience Society Annual Meeting*. 157.
- Pa, J., Pickell, B., Hatrak, M. Bellugi, U., & Hickok, G. (2005). Verbal working memory networks for speech and sign in hearing native signers [Abstract/Poster]. *Cognitive Neuroscience Society #141*,
- Pa, J., Pickell, B., Hatrak, M. Bellugi, U., & Hickok, G. (2005). Verbal working memory networks for speech and sign in hearing native signers [Abstract/Poster]. *Society for Neurosciences, Chicago, Ill.*
- Pickell, H., Bellugi, U., Klima, E.S., & Hickok, G. (to be submitted) Paraphasias in a visual-gestural language. *Academy of Aphasia*.

- Pickell, H., Emmorey, K., Hickok, G., Klima, E., & Bellugi, U. (2002). Clues from American Sign Language: The role of the right occipital lobe in language and non-language functions [Poster/Abstract]. *Academy of Aphasia Annual Meeting Abstracts*.
- Pickell, H., Hickok, G., Klima, E.S. & Bellugi, U. (2007). Important brain regions for two types of signs in ASL: Lexical signs and classifier constructions. [Abstract] *Cognitive Neurosciences Society Annual Meeting*, San Francisco, CA.
- Pickell, H., Klima, E., Hickok, G, & Bellugi, U. (2005). Administration of standardized aphasia batteries in American Sign Language [Poster/Abstract]. *American Speech and Hearing Association*, San Diego, CA.