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EDUCATION

Harvard College: A.B. cum laude, 1969
University of Texas at Austin: Ph.D. (Linguistics), 1977

HONORS

University Fellow (University of Texas, 1975-1977)
Regents Faculty Fellowship (University of California, 1978)
Doctor Honoris Causa (New Bulgarian University, 2002)
Inaugural Fellow of the Cognitive Science Society (2002)
William Waldorf Astor Visiting Fellow (Oxford, 2004)
Chancellor's Associates Endowed Chair (University of California, San Diego, 2005)
David E. Rumelhart Prize for Theoretical Contributions to Cognitive Science (2007)

POSITIONS

Interim Dean, Division of Social Sciences, University of California, San Diego: 2006-2008
Associate Dean, Division of Social Sciences, University of California, San Diego: 2002 to 2006
Founding Co-Director, Kavli Institute for Brain and Mind, University of California, San Diego: 2004 to present
Co-Director, Joint Ph.D. Program in Language and Communicative Disorders (University of California, San Diego & San Diego State University): 2003 to present
Chair, Department of Cognitive Science, University of California, San Diego: 1995 to 1998
Director, Center for Research in Language, University of California, San Diego: 1985 to 1994; 2003 to 2004
Associate Director, Center for Research in Language, University of California, San Diego: 1994 to 2003
Distinguished Professor, Department of Cognitive Science, University of California, San Diego: 2006 to present

Professor, Department of Cognitive Science, University of California, San Diego: 1989 to 2006
Professor, Department of Linguistics University of California, San Diego: 1989 to 1994
Associate Professor, Department of Cognitive Science, University of California, San Diego: 1988 to 1989
Associate Professor, Department of Linguistics University of California, San Diego: 1983 to 1989
Assistant Professor, Department of Linguistics University of California, San Diego: 1977 to 1983

MAJOR RESEARCH INTERESTS

Parallel distributed processing and connectionist models; language processing; speech perception and recognition; neurolinguistics; artificial life; development

PROFESSIONAL ASSOCIATIONS AND SERVICE

President, Cognitive Science Society (1999-2000)
Board of Governors, Cognitive Science Society (1994-2000)
Co-Director, Center for Cognitive Science, New Bulgarian University
Executive Board, Language Development Society
Member, Language and Communication Study Section, NIH (2008-20012)
External Advisory Board, Institute of Cognitive Science, University of Colorado at Boulder
Consultant, Louisiana State Board of Regents
Science Advisory Board, Artificial Life VI
Series Editor, *Neural Networks and Connectionist Modeling Monograph Series*, MIT Press
Senior Editor, *Journal of the Cognitive Science Society* (1992-1995)
Editorial Boards: *Neural Computation*; *Connection Science*; *International Journal of Neural Systems*; *Neural Networks*; *Language and Cognitive Processes; Neural Computing Surveys; Bilingualism: Language & Cognition*

PUBLISHED WORK

Books

Touretzky, D., Elman, J., Sejnowski, T., Hinton, G. (1990). *Connectionist Models Summer School Proceedings.* San Mateo, CA: Morgan Kauffman.

Mozer, M., Smolensky, P., Touretzky, D., Elman, J., & Weigand, A. (1994). *Proceedings of the 1993 Connectionist Models Summer School.* Hillsdale, NJ: Erlbaum.

Elman, J.L., Bates, E.A., Johnson, M.H., Karmiloff-Smith, A., Parisi, D., Plunkett, K. (1996). *Rethinking Innateness: A Connectionist Perspective on Development.* Cambridge, MA: MIT Press.

Plunkett, K., & Elman, J.L. (1997). *Exercises in Rethinking Innateness: A Handbook for Connectionist Simulations*. Cambridge, MA: MIT Press.

Articles

Elman, J. L. (1976). Lachmann's Law reconsidered. Texas Linguistic Forum IV, 20-38.

Elman, J. L., Diehl, R. L., & Buchwald, S. E. (1977). Perceptual switching in bilinguals. *Journal of the Acoustical Society of America*, 62, 971-974.

Elman, J.L. (1977). Response bias account of selective adaptation. *Journal of the Acoustical Society of America*, 62, S76-S77.

Elman, J.L. (1978). Spanish noun and adjective stress: A non-phonological solution. In J. P. Lantoir, J. M. Guitart, & F. Frank (Eds.) *Colloquium on Spanish and Luso-Brazilian Linguistics*. Washington, DC: Georgetown University Press. Pp. 1-8.

Diehl, R. L., Elman, J. L., & McCusker, S. B. (1978). Contrast effects on stop consonant identification. *Journal of Experimental Psychology: Human Perception and Performance*, 4, 599-609.

Elman, J. L. (1979). Perceptual origins of the phoneme boundary effect and selective adaptation to speech: A signal detection theory analysis. *Journal of the Acoustical Society of America*, 65, 190-207.

Elman, J. L. (1980). Sinstral insight and dextral dominance. In J. Herron (Ed.), *Review of the Neuropsychology of Lefthandedness, Trends in Neurosciences*, 3, 24-25.

Elman, J. L. (1980). Intonation-contingent adaptation to speech. *Perception & Psychophysics*, 27, 258-262.

Elman, J. L. (1980). Toward an interactive model of speech perception. *American Association of Phonetics Sciences*, 7, 7-19.

Elman, J. L., Takahashi, K., & Tohsaku, Y.-H. (1981). Asymmetries for the categorization of Kanji nouns, adjectives, and verbs presented to the left and right visual fields. *Brain and Language*, 13, 290-300.

Elman, J. L., Takahashi, K., & Tohsaku, Y.-H. (1981). Lateral asymmetries for the identification of concrete and abstract Kanji. *Neuropsychologia*, 407-412.

Elman, J. L. (1981). Effects of frequency-shifted feedback on the pitch of vocal

productions. *Journal of the Acoustical Society of America*, 70, 45-50.

Elman, J. L. (1982). Approaches to speech [Review of Perspectives on the study of speech]. *Contemporary Psychology*, 27, 316-317.

Shand, M. A., & Elman, J. L. (1982). Recency effects for native and non-native language presentations. *Linguistics Notes from La Jolla*, 11, 68-75.

Elman, J. L. (1983). Oral vs. manual tapping with delayed auditory feedback as a measure of cerebral dominance. *Journal of Speech and Hearing Research*, 26, 106-110.

Elman, J. L. (1984). A new psychophysics [Review of Auditory perception: A new synthesis]. *Contemporary Psychology*, 29, 12-13.

Elman, J. L., & McClelland, J. L. (1984). Speech perception as a cognitive process: The interactive activation model of speech perception. In N. Lass (Ed.), *Language and speech.* New York: Academic Press. Pp. 337-373.

Stemberger, J. P., Elman, J. L., & Haden, P. (1985). Interference between phonemes during phoneme monitoring: Evidence for an interactive activation model of speech perception. *Journal of Experimental Psychology: Human Perception and Performance*, 11, 475-489.

Elman, J. L., & McClelland, J. L. (1985). An architecture for parallel processing in speech recognition: The TRACE model. In M. R. Schroeder (Ed.), *Speech Recognition*. Gottingen: Biblioteca Phonetica. Pp. 6-35.

Elman, J. (1986). Compensation for restored phonemes: interactions between levels in speech perception. *Bulletin of the Psychonomic Society*, 24, 326-326.

Elman, J. L., & McClelland, J. L. (1986). Exploiting lawful variability in the speech. In J. S. Perkell, D. H. Klatt, (Eds.), *Invariance and variability of speech processes*. Hillsdale, NJ: Lawrence Erlbaum Associates. Pp. 360-385.

McClelland, J. L., & Elman, J. L. (1986). The TRACE model of speech perception. *Cognitive Psychology*, 18, 1-86.

Elman, J. L., & McClelland, J. L. (1986). Interactive processes in speech perception: The TRACE model (pp. 58-121). *Parallel distributed processing: Explorations in the microstructure of cognition. Vol. 2. Psychological and biological models.* Cambridge: MIT Press.

Elman, J. L., & McClelland, J. L. (1988). Cognitive penetration of the mechanisms of perception: Compensation for coarticulation of lexically restored phonemes. *Journal of Memory and Language*, 27, 143-165.

Elman, J. L., & Zipser, D. (1988). Learning the hidden structure of speech. *Journal of the Acoustical Society of America*, 83, 1615-1626.

Elman, J. L. (1989). Representation and structure in connectionist models. *Center for Research in Language Technical Report 8903*. University of California, San Diego.

Elman, J. L. (1989). Structured representations. *Proceedings of the Eleventh Annual Conference of the Cognitive Science Society*. Hillsdale, NJ: Erlbaum.

Harris, C.L., & Elman, J.L. (1984). Representing variable information with simple recurrent networks. *Proceedings of the Eleventh Annual Conference of the Cognitive Science Society*. Hillsdale, NJ: Erlbaum. Pp. 635-642.

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Nolfi, S., Elman, J.L., & Parisi, D. (1990). Learning and evolution in neural networks. *Center for Research in Language Technical Report 9019.* University of California, San Diego.

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Bartell, B. T., Cottrell, G. W., & Elman, J. L. (1991). The role of input and target similarity in assimilation. In *Proceedings of the Thirteenth Annual Conference of the Cognitive Science Society.* Hillsdale, NJ: Erlbaum.

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Elman, J.L. (1998). Generalization, simple recurrent networks, and the emergence of structure. In M. A. Gernsbacher & S. J. Derry (Eds.) *Proceedings of the Twentith Annual Conference of the Cognitive Science Society*. Mahwah, NJ: Erlbaum.

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Bates, E., Elman, J., Johnson, M., Karmiloff-Smith, A., Parisi, D., & Plunkett, K. (1998). Innateness and emergentism. In William Bechtel & George Graham (Eds.), *A Companion to Cognitive Science.* Oxford: Basil Blackwood. Pp. 590-601.

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Bates, E., & Elman, J. (2000). The ontogeny and phylogeny of language: A neural network perspective. In S. T. Parker, J. Langer, & M. L. McKinney (Eds.), *Biology, Brains, and Behavior: The evolution of human development*. Santa Fe, NM:School of American Research Press. Pp. 89-130.

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Lewis, J.D., & Elman, J.L. (2001). A connectionist investigation of linguistic arguments from the poverty of the stimulus: Learning the unlearnable. In J.D. Moore and K. Stenning (Eds.) *Proceedings of the Twenty-Third Annual Conference of the Cognitive Science Society*, Mahwah, NJ: Lawrence Erlbaum Associates. Pp. 552-557.

McRae, K., Hare, M., Ferretti, T., & Elman, J. (2001). Activating verbs from typical agents, patients, instruments, and locations via event schemas. In J.D. Moore and K. Stenning (Eds.) *Proceedings of the Twenty-Third Annual Conference of the Cognitive Science Society*, Mahwah, NJ: Lawrence Erlbaum Associates. Pp. 617-622.

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Bates, E., & Elman, J. (2001). Connectionism and the study of change. In M. Johnson (Ed.), *Brain development and cognition: A reader.* (2nd ed). Oxford: Blackwell Publishers. [revised/updated/extended version of Bates, E., & Elman, J. Connectionism and the study of change. In M. Johnson (Ed.), *Brain development and cognition: A reader*. Oxford: Blackwell Publishers, 1993, 623-642.]

Lewis, J., & Elman, J. (2001). A connectionist investigation of linguistic universals: Learning the unlearnable. In R. Amos, C. Bradford, C. Jefferson, and D. Meyers (Eds.), *Proceedings of the Fifth International Conference on Cognitive and Neural Systems.* Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University.

Lewis, J., & Elman, J. (2002). Learnability and the statistical structure of language: Poverty of the stimulus arguments revisited. In *Proceedings of the 26th Annual Boston University Conference on Language Development.* Somerville, MA: Cascadilla Press. Pp. 359-370.

Hare, M., McRae, K., & Elman, J.L. (2003). Sense and structure: Meaning as a

determinant of verb subcategorization preferences. *Journal of Memory and Language*, 48, 281-303.

Elman, J. (2003). Development: It's about time. *Developmental Science,* 6, 430-433.

Lewis, J.D., Courchesne, E., & Elman, J.L. (2003). Patterns of brain growth predict patterns of long-distance connectivity. In *Proceedings of the 34th Annual Meeting of the Cognitive Science Society*. Chicago, Il.

Elman, J.L. (2004). Generalization from sparse input. *Proceedings of the 38th Annual Meeting of the Chicago Linguistic Society*.

Lewis, J.D., Courchesne, E., & Elman, J.L. (2004). Growth trajectories and corticocortical connections. In *Proceedings of the 37th Annual Gatlinburg Conference on Research & Theory in Intellectual and Developmental Disabilities.* Pp. 104.

Hare, M., McRae, K., & Elman, J.L. (2004). Admitting that admitting verb sense into corpus analyses makes sense. *Language and Cognitive Processes,* 19, 181-224.

Elman, J., Hare, M., & McRae, K. (in press). Cues, constraints, and competition in sentence processing. In M. Tomasello and D. Slobin (Eds.) *Beyond Nature-Nurture: Essays in Honor of Elizabeth Bates.* Mahwah, NJ: Lawrence Erlbaum Associates.

Lewis, J.D., Courchesne, E., & Elman, J. (2004). Growth trajectories and cortico-cortical connections. Paper presented at the 37th Annual Gatlinburg Conference on Research & Theory in Intellectual Developmental Disabilities. San Diego, CA.

Elman, J.L. (2004). An alternative view of the mental lexicon. *Trends in Cognitive Science,* 8, 301-306.

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Shieh, D.X., & Elman, J.L. (2006). The Divergent-Reconvergent model of serial order encoding and retrieval. Proceedings of the 29th Annual Meeting of the Cognitive Science Society.

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Huang, M-X., Saong, T., Hagler, D.J., Podgorny, I., Jousmaki, V., Cui, L., Gaa, K., Harrington, D.L., Dale, A.M., Lee, R.R., Elman, J., & Halgren, E. (2007). A novel integrated MEG and EEG analysis method for dipolar sources. *NeuroImage*, 37, 731-748.

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