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(3/10/11)

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EDUCATION

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Ph.D. 2000 Linguistics & Cognitive Science, University of Colorado at Boulder  
M.S. Computer Science. University of Colorado at Boulder  
M.S. Applied Mathematics. University of Colorado at Boulder  
B.S. Mathematics & Mineral Engineering. Colorado School of Mines

ACADEMIC EMPLOYMENT

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Assistant to the Director of the Center for Research on Training, University of Colorado at Boulder  
[2005 to Present]  
Research Associate, Dept. of Psychology, University of Colorado at Boulder. *Transferability and durability of Learning*. University of Colorado, MURI grant. Principal Investigators: Alice F. Healy and Lyle Bourne, Jr. Dept of Psychology, CU [Sept. 2003 to Present]  
Research Associate, Dept. of Psychology and Department of Linguistics, The Ohio State University. *Variation in Conversation*. The Ohio State University, NIH grant. Principal Investigators: Mark Pitt, Dept. of Psychology, OSU, Keith Johnson, Dept of Linguistics OSU, Elizabeth Hume, Dept. of Linguistics, OSU. [Sept. 2000 to Sept. 2003]

GRADUATE RESEARCH *Knowledge of Implicit Rules*. Alice Healy, Dept. of Psychology and Institute of Cognitive Science. [Summer 1996, Summer 1997, 1998]  
*Optimality Theory in Syntax*. Géraldine Legendre, Dept of Linguistics, and Paul Smolensky, Dept of Computer Science. [Spr 1992 – Sum 1993]  
*Chadic Language Typology*, Zygmunt Frajzyngier, Dept of Ling. [Sp 1991]

TEACHING *Issues and Methods in Cognitive Science* PSY 6200. [CU SPRING 2005]  
*Semantics* 3430. [CU Fall 1999]  
*Language in U.S. Society*. [CU Summer 1997]  
*Basic Traditional Grammar*. [CU Fall 1996, Spring 1998]  
*Issues and Methods in Cognitive Science*. [CU (TA) Spring 1996]  
*Computational methods in Linguistics*. [CU (TA) Spring 1997]  
*Phonetics*. [CU (TA) Fall 1992, Fall 1994, Fall 1995, Fall 1997]  
*Experimental Research Practicum, Psychology*. [CU (TA) Spring 1999, 2000]  
*Language in U.S. Society*. [CU (TA) Fall 1991, Fall 1993, Spring 1995, Fall 1998]  
*A course in Pascal*. Martin Marietta Aerospace.

RESEARCH INTERESTS

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My research centers on the learning, representation, production, and processing of language and, more generally, of knowledge. I am currently investigating categorization strategies and the developmental acquisition of rule-like behavior. This and related research for a MURI grant has been used to develop a taxonomy of skills and training that will relate learning and performance. I also continue to quantify and model phonetic variation using corpora of spontaneous speech, in English and Spanish, and to explore grammatical encoding and speech production. My research is interdisciplinary work that uses statistical, computational, distributional, and experimental methodologies, drawing on data from large corpora, psycholinguistic tasks, typological surveys, and speech errors.

## PREVIOUS PROFESSIONAL EMPLOYMENT

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COGNITIVE SCIENCE	Senior Research Scientist, Adaptive Cognitive Systems, Boulder, CO (5-11/2011)
COMPUTER SCIENCE	Software Developer, Martin Marietta Aerospace (3 YEARS) Member of Technical Staff, Bell Labs/AT&T Information Systems (7 YEARS) Freelance technical and science writer (4 years)

## PUBLICATIONS

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- Raymond, W. D., Healy, A. F., & McDonnell, S. (submitted). Pairing words with syntactic frames: Syntax, semantics, and count-mass usage. *Journal of Psychological Research*.
- Brown, E. L., & Raymond, W. D. (submitted). How discourse context shapes the lexicon: Explaining the distribution of Spanish *f-/h-* words. *Diachronica*.
- Raymond, W. D., & Brown, E. L. (in press). Are effects of word frequency effects of context of use? An analysis of initial fricative reduction in Spanish. In Divjak, D., & Gries, S. Th. (Eds.), *Frequency effects in language: Learning and processing*.
- Bourne, L. E., Jr., Raymond, W. D., & Healy, A. F. (2010). Strategy selection and use during classification skill acquisition. *Journal of Experimental Psychology: Language, Memory, and Cognition*, 36, 500-514.
- Brown, E. L., & Raymond, W. D. (in press). De la articulación a la lexicalización: El papel de factores lingüísticos en la reducción histórica de *F-* latina en español. In Proceedings of the Congreso de Historia de la Lengua Española VIII.
- Raymond, W. D., Healy, A. F., McDonnell, S., & Healy, C. A. (2009). Acquisition of morphological variation: The case of the English definite article. *Language and Cognitive Processes*, 24, 89-119.
- Raymond, W. D., Fornberg, B., Buck-Gengler, C. J., Healy, A. F., & Bourne, L. E., Jr. (2008). Matlab optimization of an IMPRINT model of human behavior. In Proceedings of the Seventeenth Conference on Behavior Representation in Modeling and Simulation (pp. 26-33). Providence, RI: Simulation Interoperability Standards Organization.
- Buck-Gengler, C. J., Raymond, W. D., Healy, A. F., & Bourne, L. E., Jr. (2007). Modeling data entry in IMPRINT. In Proceedings of the Sixteenth Conference on Behavior Representation in Modeling and Simulation (pp. 205-206). Orlando, FL: Simulation Interoperability Standards Organization.
- Raymond, W. D., Dautricourt, R., & Hume, E. (2006). Word-medial /t-d/ deletion in spontaneous speech: Modeling the effects of extra-linguistic, lexical, and phonological factors. *Language Variation and Change*, 18, 55-97.
- Pitt, M. A., Johnson, K., Hume, E., Kiesling, S., & Raymond, W. D. (2005). The *Buckeye* corpus of conversational speech: Labeling conventions and a test of transcriber reliability. *Speech Communication*, 45, 90-95.
- Raymond, W. D. (2003). Factors influencing transcription consistency in the *Buckeye* corpus of spontaneous speech. In K. Maekawa (Ed.), *Proceedings of the Spontaneous Speech and Data Analysis Workshop*, Tokyo, Japan, August, 2002.
- Healy, A. F., Buck-Gengler, C. J., Barshi, I., Parker, J. T., Schneider, V. I., Raymond, W. D., LaVoie, N. N., Bowles, A. R., Pauli, P., Fisher, J. A., & Bourne, L. E., Jr. (2002). Optimizing the durability and generalizability of knowledge and skills. In S. P. Shohov (Ed.), *Advances in psychology research* (Vol. 8, pp. 103-174). Huntington, NY: Nova Science Publishers. Also reprinted in S. P. Shohov (Ed.), *Trends in cognitive psychology* (2002, pp. 123-192). Hauppauge, NY: Nova Science Publishers.

- Raymond, W. D., Pitt, M., Johnson, K., Hume, E., Makashay, M., Dautricourt, R., & Hilts, C. (2002). An analysis of transcription consistency in spontaneous speech from the *Buckeye* corpus. *Proceedings of the International Conference on Spoken Language Processing (ICSLP-02)*, Denver, CO.
- Raymond, William D., Fisher, J. A., & Healy, A. F. (2002). Linguistic knowledge and language performance in English article variant performance. *Language and Cognitive Processing*, 17, 613-662.
- Jurafsky, D., Bell, A., Gregory, M., & Raymond, W. D. (2001). The effect of language model probability on pronunciation reduction. *Proceedings of ICASSP-01*, Salt Lake City, UT, July, 2001.
- Jurafsky, D., Bell, A., Gregory, M., & Raymond, W. D. (2001). Probabilistic Relations between Words: Evidence from Reduction in Lexical Production. In Joan Bybee and Paul Hopper (Eds.). *Frequency and the emergence of linguistic structure*. Amsterdam: John Benjamins. 229-254.
- Kiesling, S. & Raymond, W. D. (2000). The ViC transcriber's manual: Guidelines for transferring, transcribing, and labeling sound files in the *Buckeye* corpus. Users guide, the Ohio State University.
- Raymond, W. D. (2000). Toward a theory of grammatical encoding in speech production: Evidence from speech errors. Ph.D. Dissertation, Linguistics and Cognitive Science, University of Colorado [Available as the University of Colorado Institute of Cognitive Science Technical Report 01-01].
- Gregory, M., Raymond, W. D., Bell, A., Fosler-Lussier, E., & Jurafsky, D. (1999). Effects of collocational strength and contextual predictability in lexical production. *Proceedings of the Chicago Linguistic Society*, 35, 151-166.
- Jurafsky, D., Bell, A., Fosler-Lussier, E., Girand, C., & Raymond, W. D. (1998). Reduction of English function words in Switchboard. *Proceedings of the International Conference on Spoken Language Processing (ICSLP-98)*.
- Raymond, W. & Homer, K. (1996). The interaction of participant role and pragmatic function in the selection of question form. *Proceedings of BLS 22*, 316-328.
- Raymond, W. (1995). The cognitive correlates of aspect and the English present perfect. *Colorado Research in Linguistics 14*, 58-65.
- Legendre, G., Wilson, C., Smolensky, P., Homer, K., & Raymond, W. D. (1994). Optimality and Wh-extraction. In *University of Massachusetts Occasional Papers in Linguistics 18: Papers in Optimality Theory*, ed. by J. Beckman, S. Urbanczyk, & L. Walsh., GLSA, University of Massachusetts, 607-636. Partially reprinted 2006 in P. Smolensky and G. Legendre (Eds.), *The Harmonic Mind*, vol. 2. Cambridge: MIT Press. 183-230.
- Raymond, W. & Hogan, A. (1994). A user's guide to the Optimality Interpreter: A software tool for optimality analysis. *Technical Report CU-CS-734-94*, Department of Computer Science, University of Colorado at Boulder.
- Legendre, G., Smolensky, P., & Raymond, W. (1993). An optimality-theoretic typology of case and grammatical voice systems. *Proceedings of BLS 19*, 464-478. Reprinted 2006 in P. Smolensky and G. Legendre (Eds.), *The Harmonic Mind*, vol. 2. Cambridge: MIT Press. 163-181.
- Raymond, W., & Bell, A. (1993). Malapropisms and the interaction of factors of lexical access. *Proceedings of the 1993 Mid-America Linguistics Conference*, 79-90.
- Raymond, W. D. (1993). A typological investigation of the structure of consonant inventories. *Colorado Research in Linguistics 12*, 1-25.

- Raymond, W. D. & Buck-Gengler, C. J. (2010). Modeling training performance in IMPRINT: Insights from MURI modeling. Paper presented at the Ellis-Battig Memorial Symposium, 80<sup>th</sup> Annual Convention of the Rocky Mountain Psychological Association, Denver, CO, April 16, 2010.
- Buck-Gengler, C. J., Raymond, W. D., Healy, A. F., & Bourne, L. E., Jr. (2010). Modeling a visual search task with a secondary task in IMPRINT. In *Proceedings of the Nineteenth Annual Conference on Behavior Representation in Modeling and Simulation*, Charleston, SC, March 22-25, 2010. Available on CD-ROM.
- Brown, E. L., & Raymond, W. D. (2009). De la articulación a la lexicalización: El papel de factores lingüísticos en la reducción histórica de *F*- latina en español. Paper presented at the Congreso de Historia de la Lengua Española VIII, Santiago de Compostela, ES, September 18, 2009.
- Raymond, W. D., Healy, A. F., McDonnell, S., & Healy, C. (2009). Lexical, syntactic, and semantic influences on count-mass preferences by teenagers and adults. Poster to be presented at the Biennial meeting of the Society for Research on Child Development, Denver, CO, April, 2009.
- Raymond, W. D., Fornberg, B., Buck-Gengler, C. J., Healy, A. F., & Bourne, L. E., Jr. (2008). Matlab optimization of an IMPRINT model of human behavior. Paper presented at the Behavior Representation in Modeling and Simulation Conference, Providence, R.I., April 16, 2008.
- Raymond, W. D., Buck-Gengler, C. J., Healy, A. F., & Bourne, L. E., Jr. (2007). Predicting differences in individual learning and performance in a motor skill task. Paper presented at the 77th Annual Convention of the Rocky Mountain Psychological Association Meeting, Denver, CO, April 14, 2007.
- Buck-Gengler, C. J., Raymond, W. D., Healy, A. F., & Bourne, L. E., Jr. (2007). Modeling data entry in IMPRINT. Poster presented at the 16th Conference on Behavior Representation in Modeling and Simulation (BRIMS), Norfolk, Virginia, March 27, 2007.
- Raymond, W. D., Healy, A. F., Rains, J., & Bourne, L. E., Jr. (2006). Affordances and choices in strategy shifts in skill acquisition tasks. Paper presented at the 76th annual convention of the Rocky Mountain Psychological Association, Park City, UT, April 21, 2006.
- Raymond, W. D., Girand, C., and Brenier, J. (2005). *Actually*: We know what you meant by the way you said it. Paper presented at the LSA Annual Meeting, Oakland, CA, January, 2005.
- Dautricourt, R., & Raymond, W. D. (2004). Sources of variation in American English word-boundary palatalization environments. Poster presented at AMLaP 2004, Aix-en-Provence, Fr., September, 2004.
- Bourne, L. E., Jr., Healy, A. F., Kole, J. A., & Raymond, W. D. (2004). Bases for strategy choice and strategy transitions in binary classification tasks. Paper presented at the 45<sup>th</sup> Annual Meeting of the Psychonomic Society, Minneapolis, MN, November, 2004.
- Raymond, W. D., Pitt, M., Johnson, K., Hume, E., Makashay, M., Dautricourt, R., & Hilts, C. (2002). An analysis of transcription consistency in spontaneous speech from the *Buckeye* corpus. Poster presented at *ICSLP-02*, Denver, CO, September, 2002.

- Dautricourt, R., Raymond, W. D., & Hume, E. (2002). Modeling medial /t-d/ in spontaneous speech. Poster presented at NWA7, Stanford University, Palo Alto, CA, October, 2002.
- Raymond, W. D. (2002). Coding consistency in the transcription of spontaneous speech from the *Buckeye* corpus. Invited talk at the "Spontaneous Speech: Data and Analysis" workshop, the National Institute for Japanese Language 10<sup>th</sup> International Symposium, Tokyo, Japan, August, 2002.
- Raymond, W. D., Makashay, M. J., Dautricourt, R., Johnson, K., Hume, E., & Pitt, M. (2001). Variation in conversation: An introduction to the Buckeye speech corpus. Poster presented at the Acoustical Society of America annual meeting, Ft. Lauderdale, FL, December, 2001.
- Raymond, W. D., Jurafsky, D., Gregory, M., & Bell, (2001). A. The asymmetric effect of local context on word duration: Consequences for models of speech production. Paper presented at AMLaP 2001, Saarbruecken, Ger., September, 2001.
- Gregory, M., Bell, A., Jurafsky, D., & Raymond, W. D. (2001). Frequency and predictability effects on the duration of content words in conversation. Poster presented at the Acoustical Society of America annual meeting, Ft. Lauderdale, FL, December, 2001.
- Gregory, M., Raymond, W. D., Jurafsky, D., & Bell, A. (2001). Probabilities in the mental grammar: Evidence from production in natural language conversation. Paper presented at the CUNY Sentence Processing Conference. University of Pennsylvania, Philadelphia, PA, March, 2001.
- Gregory, M., Raymond, W. D., Bell, A., & Jurafsky, D. (2000). Modeling informativeness in speech production. Poster presented at LabPhon 7, U. of Nijmegen, NL, June, 2000.
- Raymond, W. D. (1999). Grammatical function assignment in production: Evidence from observational data. Poster presented at AMLaP 99, Edinburgh, UK, September, 1999.
- Gregory, M., Raymond, W. D., Bell, A., & Jurafsky, D. (1999). Effects of informativeness of durational shortening in conversation. Paper presented at the Annual Meeting of the Society for Text and Discourse, Vancouver, BC, August, 1999.
- Raymond, W. D., Fisher, J. A., Healy, A. F., & Bourne, L. E., Jr. (1999). Language variation and rule interaction: English articles in production and perception. Paper presented at the Annual Meeting of the Linguistic Society of America, Los Angeles, CA, January, 1999.
- Raymond, W. D., Fisher, J. A., Healy, A. F., & Bourne, L. E., Jr. (1998). Implicit knowledge of abstract rules in a language task. Paper presented at the Western Psychological Association and Rocky Mountain Psychological Association Joint Convention, Albuquerque, NM, April, 1998.
- Raymond, W. D., & Bell, A. (1998). Modeling speech production and processing: Evidence from lexical substitution errors. Poster presented at the 11th Annual CUNY Conference on Human Sentence Processing, New Brunswick, NJ, March, 1998.
- Bell, A. & Raymond, W. D. (1997). Target-error relations in lexical substitution errors: Some consequences for models of speech production. Poster presented at the Conference on Computational Psycholinguistics (CPL-97), Berkeley, CA, August, 1997.
- Raymond, W. & Bell, A. (1996). Frequency effects in malapropisms. Poster presented at the Third Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan [Abstract published in the *Journal of the Acoustical Society of America* 100, 2572], Honolulu, HI, December, 1996.

Homer, K. & Raymond, W. (1995). An optimality theoretic analysis of question asymmetries: The interaction of semantic and information schemata in the selection of question form. Paper presented at the International Cognitive Linguistics Association Conference, Albuquerque, NM, July, 1995.