

Francisco José López Gutiérrez

Curriculum Vitae

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Research Interests

Human contingency learning and causal cognition. Acquisition, representation and use of causal knowledge in different domains. Psychological processes of learning: associative and inferential accounts. Computational models of learning and simulations of behavioral data. Event-related brain potential studies of error detection.

Education

- 1984 High School Diploma (Science), Instituto Polígono de Cártama, Málaga, Spain
- 1989 Degree in Psychology, University of Málaga (Spain)
- 1991 Research Graduation in Psychology, University of Málaga (Spain), Advisor: Prof. Julián Almaraz
- 1994 PhD in Psychology, University of Málaga (Spain), Advisors: Prof. David R. Shanks and Prof. Julián Almaraz.

Positions Held:

- 1990-1994 Research Assistant, University of Málaga (Spain).
- 1994-1999 Assistant, Associate Professor, University of Málaga (Spain).
- 1999-present Senior Lecturer, University of Málaga (Spain).

Teaching Experience:

20+ years of teaching experience at the undergraduate, master and graduate level in Spain on topics in psychology such as Psychology of Learning, Memory, Motivation and Emotion, and Topics in Cognitive Science.

Contributions to Refereed Journals and Grant Agencies:

- 1996+** Guest Reviewer for *Journal of Experimental Psychology: Learning, Memory, and Cognition*; *The Quarterly Journal of Experimental Psychology*; *Memory and Cognition*; *Canadian Journal of Experimental Psychology*; *Psychonomic Bulletin and Review*.
- 2010+** Guest Referee for the Spanish ANEP (*National Evaluation and Foresight Agency*) and for the Ministry of Economy and Competitiveness (*Spanish Research Council*).

Society Memberships and responsibilities:

Spanish Society of Comparative Psychology, Full Associate.

Experimental Psychology Society, Full Associate.

Psychonomic Society, Full Associate.

Spanish Society of Experimental Psychology, Full Associate and from 2010, member of the Governing Board; from 2012 to October, 2014, Treasurer of the Society.

Research Grants (2000+):

- 2000-2003** Leading researcher: Francisco J. López. *Associative mechanisms of causal induction*. Ministry of Science and Technology. BSO2000-1216. 13,230€.
- 2005-2008** Leading researcher: Francisco J. López. Causal inference processes in uncertain situations. Andalusian Regional Science Agency. SEJ2005-0406. 134,500€.
- 2007-2010** Leading researcher: Helena Matute. Associate researcher: Francisco J. López. Causal learning: theory, method and applications. Ministry of Science and Education. SEJ2007-63691/PSIC. 91,800€.

- 2009-2013** Leading researcher: Francisco J. López. Diagnostic processes and actions in uncertain situations. Andalusian Regional Science Agency. SEJ2008-03586. 236,845€.
- 2012-2014** Leading researcher: Pedro L. Cobos. Associate researcher: Francisco J. López. Associative processes involved in human contingency learning. Ministry of Science and Innovation. PSI2011-24662. 90,750€.

Publications:

In peer-reviewed journals

- Shanks, D.R. and López, F. J. (1996). Causal order does not affect cue selection in human associative learning. *Memory & Cognition*, 24, 511-522.
- Luque, J.L., Caño, A., Cobos, P. L., and López, F. J. (1998). Sobre los niveles de Marr y la naturaleza de la explicación científica en el estudio de la memoria. *Cognitiva*, 10, 99-103.
- López, F. J., Shanks, D.R., Almaraz, J., and Fernández, P. (1998). Effects of trial order on contingency judgments: a comparison of associative and probabilistic contrast accounts. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 24, 672-694.
- López, F. J., Almaraz, J., Fernández, P. and Shanks, D.R. (1999). Adquisición progresiva del conocimiento sobre relaciones predictivas: curvas de aprendizaje en juicios de contingencia. *Psicothema*, 11, 337-349.
- Cobos, P. L., Caño, A., López, F. J. and Almaraz, J. (2000). Does the type of judgment required modulate cue competition? *The Quarterly Journal of Experimental Psychology*, 53B, 193-207.
- Caño, A., López, F. J., Cobos, P. L. and Almaraz, J. (2002). Inter-relaciones entre los niveles computacional y algorítmicos. *Cognitiva*, 14, 57-63.
- Cobos, P. L., López, F. J., Caño, A., Almaraz, J. and Shanks, D.R. (2002). Mechanisms of predictive and diagnostic causal induction. *Journal of Experimental Psychology: Animal Behavior Processes*, 28, 331-346.
- López, F. J., Cobos, P. L., and Caño, A. (2005). Associative and causal reasoning accounts of causal induction: symmetries and asymmetries in predictive and diagnostic inferences. *Memory & Cognition*, 33, 1388-1398.

- Cobos, P. L., López, F. J. and Luque, D. (2007). Interference between cues of the same outcome depends on the causal interpretation of the events. *The Quarterly Journal of Experimental Psychology*, 60, 369-386.
- Luque, D., Cobos, P. L. and López, F. J. (2008). Interference between cues requires a causal scenario: favorable evidence for causal reasoning models in learning processes. *Learning & Motivation*, 39, 196-208.
- Orgaz, C., Luque, D., Vadillo, M.A., López, F. J. y Matute, H. (2008). La interferencia retroactiva entre claves entrenadas por separado: evidencia empírica y enfoques teóricos. *Escritos de Psicología*, 2, 83-94.
- Luque, D., Morís, J., Cobos, P. L. y López, F. J. (2009). Interference between cues of the same outcome in a non-causally framed scenario. *Behavioral Processes*, 81, 328-332.
- Luque, D., López, F. J. Marco-Pallarés, J. Càmarà, E. y Rodríguez-Fornells, A. (2012). Feedback-related brain potential activity complies with basic assumptions of associative learning theory. *Journal of Cognitive Neuroscience*, 24, 794-808.
- González-Martín, E., Cobos, P. L., Morís, J. and López, F. J. (2012). Interference between outcomes, spontaneous recovery, and context effects as measured by a cued response reaction time task: evidence for associative retrieval models. *Journal of Experimental Psychology: Animal Behavior Processes*, 38, 419-432.
- Vadillo, M.A., Orgaz, C., Luque, D., Cobos, P. L., López, F. J. and Matute, H. (2013). The role of outcome inhibition in interference between outcomes: a contingency-learning analogue of retrieval-induced forgetting. *British Journal of Psychology*, 104, 167-180.
- Cobos, P.L., González-Martín, E., Varona-Moya, S. and López, F.J. (2013). Renewal effects in interference between outcomes as measured by a cued response reaction time task: further evidence for associative retrieval models. *Journal of Experimental Psychology: Animal Behavior Processes*, 39, 299-310.
- Morís, J., Cobos, P. L., Luque, D., and López, F. J. (2014). Associative repetition priming as a measure of human contingency learning: evidence of forward and backward blocking. *Journal of Experimental Psychology: General*, 143, 77-93.
- Flores, A., Cobos, P. L., López, F. J., Godoy, A. and González-Martín, E. (2014). The influence of causal connections between symptoms on the diagnosis of mental disorders: evidence from on-line and off-line measures. *Journal of Experimental Psychology: Applied*, 20, 175-190
- Flores, A., Cobos, P.L., López, F.J. and Godoy, A. (2014). Detecting fast, on-line reasoning processes in clinical decision making. *Psychological Assessment*, 26, 660-665.

Book chapters

- López, F. J. and Fernández, P. (1995). Detección de relaciones de contingencia entre acontecimientos. In M. Carretero, J. Almaraz, and P. Fernández (Eds.) *Razonamiento y comprensión* (pp. 71-93). Madrid: Trotta.
- López, F. J. and Almaraz, J. (1995). Aprendizaje de relaciones causales. In J. Almaraz, P. Fernández, and A. Giménez (Eds.). *Prácticas de psicología cognitiva: aprender*. Madrid: McGraw-Hill.
- Shanks, D.R., López, F. J., Darby, R.J., and Dickinson, A. (1996). Distinguishing associative and probabilistic theories of human contingency judgments. In D.R. Shanks, K.J. Holyoak, and D.L. Medin (Eds.), *The Psychology of Learning and Motivation* (vol. 34, pp. 265-312). San Diego, CA: Academic Press.
- López, F. J., Cobos, P. L., Caño, A., and Shanks, D.R. (1998). The rational analysis of human causal and probability judgment. In M. Oaksford and N. Chater (Eds.), *Rational models of cognition* (pp. 314-352). Oxford: Oxford University Press.
- Cobos, P. L., Caño, A. and López, F. J. (2000). Biases in probabilistic reasoning can be produced by associative learning mechanisms. In J.A. García-Madruga, N. Carriedo and M.J. González-Labra (Eds.), *Mental models in reasoning* (pp. 155-178). Madrid: UNED.
- López, F. J., Cobos, P. L., Caño, A. and Almaraz, J. (2003). Mecanismos asociativos de inducción causal y realización de inferencias. In J. Vila, J. Nieto and J.M. Rosas (Eds.), *Investigación contemporánea en aprendizaje asociativo* (pp. 143-158). Jaén: del Lunar.
- Luque, D., Cobos, P. L. and López, F. J. (2005). Procesos de razonamiento causal en la interferencia entre señales. In J. Vila, J. Nieto and J.M. Rosas (Eds.), *Aprendizaje causal y recuperación de la información* (pp. 18-30). Jaén: del Lunar.
- Luque, D., López, F. J. and Cobos, P. L. (2007). Procesos de aprendizaje causal. In O. Pineño, M.A. Vadillo and H. Matute (Eds.), *Psicología del aprendizaje* (pp. 323-346). Badajoz: Abecedario.
- López, F. J. and Shanks, D.R. (2008). Models of animal learning and their relations to human learning. In R. Sun (Ed.), *Handbook of computational cognitive modeling* (pp. 589-611). Cambridge, MA: Cambridge University Press.

Conference contributions (2000+):

- López, F. J., Cobos, P. L., Caño, A & Shanks, D.R. (2000). Mechanisms of predictive and diagnostic causal inferences. *Joint Meeting of the Experimental Psychology Society and the Canadian Society for Brain, Behavior & Cognitive Science*. Cambridge (United Kingdom).
- Cobos, P. L., López, F. J., Caño, A. & Almaraz, J. (2000). Mecanismos de inferencias diagnósticas. *XII Congreso de la Sociedad Española de Psicología Comparada*. Granada (Spain).
- Caño, A., Cobos, P. L. & López, F. J. (2000). La competencia entre claves en el aprendizaje de relaciones causales es independiente del tipo de juicio requerido. *XII Congreso de la Sociedad Española de Psicología Comparada*. Granada (Spain).
- Caño, A., Luque, D., Damas, J., Cobos, P. L. & López, F. J. (2003). Test question dependency in cue competition depends on the complexity of the design. *XV International meeting of Spanish Society of Comparative Psychology*. Barcelona (Spain).
- López, F. J., Cobos, P. L., Caño, A., Almaraz, J. & Shanks, D.R. (2002). Insensitivity to prior causal knowledge in causal inference. *Joint Meeting of the Experimental Psychology Society and the Experimental Belgian Society*. Leuven (Belgium).
- Cobos, P. L., López, F. J. & Caño, A. (2002). Associative account of biases: conversion bias and conjunction fallacy. *13th. General Meeting of the European Association of Experimental Social Psychology*. San Sebastián (Spain).
- Cobos, P. L., Caño, A., López, F. J. & Almaraz, J. (2002). Asimetrías en inferencias predictivas y diagnósticas: el papel del escenario causal y las instrucciones. *XIV Congreso de la Sociedad Española de Psicología Comparada*. Sevilla (Spain).
- López, F. J., Cobos, P. L. & Caño, A. (2002). Algunas limitaciones de la teoría del poder causal. *XIV Congreso de la Sociedad Española de Psicología Comparada*. Sevilla (Spain).
- López, F. J., Cobos, P. L., Caño, A. & Almaraz, J. (2003). Hacia la búsqueda de factores procedimentales que determinan el hallazgo de simetrías o asimetrías entre inferencias predictivas y diagnósticas. *XV Congreso de la Sociedad Española de Psicología Comparada*. Barcelona (Spain).
- López, F. J., Cobos, P. L., Caño, A. & Almaraz, J. (2003). Associative and causal reasoning accounts of causal induction. *44th. Annual Meeting of the Psychonomic Society*. Vancouver (Canada).

- López, F. J., Caño, A., Cobos, P. L. & Almaraz, J. (2004). Associative and causal reasoning accounts of inferences: evidence from an overshadowing paradigm. *VII European Conference on Psychological Assessment*. Benalmádena (Málaga, Spain).
- López, F. J., Cobos, P. L. & Caño, A. (2004). Differences and similarities among predictive and diagnostic inferences: role of the perceived relevance of causal information. *XVI Congreso de la Sociedad Española de Psicología Comparada*. Oviedo (Spain).
- Luque, D., Cobos, P. L., López, F. J. & Caño, A. (2004). Interference between effects but not between causes in designs of interference between cues: importance of previous causal knowledge. *I Joint Meeting of the Spanish Society of Comparative Psychology and the International Society for Comparative Psychology*. Oviedo (Spain).
- López, F. J., Cobos, P. L., Caño, A. & Luque, D. (2004). Associative and causal reasoning accounts of causal inferences. *Special Interest Meeting on Human Contingency Learning*. Leuven (Belgium).
- Luque, D., Cobos, P. L. & López, F. J. (2005). Is interference between cues of the same outcome mediated by causal reasoning processes? *XVII International meeting of Spanish Society of Comparative Psychology*. Madrid (Spain).
- Luque, D., Cobos, P. L., López, F. J., González-Martín, E. & Almaraz, J. (2006). El realismo de los estímulos afecta la obtención de interferencia entre señales: evidencias a favor de los modelos de razonamiento causal. *VI Meeting of the Spanish Society of Experimental Psychology*. Santiago de Compostela (Spain).
- Cobos, P. L., López, F. J., Luque, D., González-Martín, E. & Almaraz, J. (2006). Generalización de la interferencia a una señal no ambigua. *VI Meeting of the Spanish Society of Experimental Psychology*. Santiago de Compostela (Spain).
- González-Martín, E., Luque, D., López, F. J., Cobos, P. L. & Almaraz, J. (2006). The addition of trials of interference between outcomes of the same cue prevents reduced overshadowing. *XVIII International meeting of Spanish Society of Comparative Psychology*. Málaga (Spain).
- Cobos, P. L., López, F. J., Luque, D., González-Martín, E. & Almaraz, J. (2006). Effects of interference between outcomes on responses to a non-ambiguous cue. *XVIII International meeting of Spanish Society of Comparative Psychology*. Málaga (Spain).
- Luque, D., Cobos, P. L. & López, F. J. (2007). Interference between cues: Is there any evidence of an associative-based retrieval failures? *XIX International meeting of Spanish Society of Comparative Psychology*. Madrid (Spain).

- Luque, D., Rodríguez-Fornells, A., Càmara, E., Cobos, P. L. & López, F. J. (2007). Error computation in causal learning measured by event-related brain potentials. *XIX International meeting of Spanish Society of Comparative Psychology*. Madrid (Spain).
- Luque, D., Cunillera, A., Cobos, P. L., López, F. J., Rodríguez-Fornells, A., Càmara, E., Krämer, U. M., Marco-Pallarés, J., Cucurell, D., Nager, W., Schüle-Freyer, R., Schöls, L. y Münte, T. F. (2007). Dopaminergic polymorphisms and their effects on human contingency learning. *XIX International meeting of Spanish Society of Comparative Psychology*. Madrid (Spain).
- Morís, J., Cobos, P. L., Luque, D., López, F. J. & Almaraz, J. (2007). Generalization of interference to non-ambiguous cues. *XIX International meeting of Spanish Society of Comparative Psychology*. Madrid (Spain).
- Cobos, P. L., Luque, D. & López, F. J. (2007). Interference between different cues of the same outcome requires a causal interpretation of the events. *Joint meeting of the Psychonomic Society and the Experimental Psychology Society*. Edinburgh (United Kingdom).
- González-Martín, E., López, F. J., Cobos, P. L., Luque, D. & Almaraz, J. (2007). Modulation of cue-interaction effects by the addition of interference trials. *Joint meeting of the Psychonomic Society and the Experimental Psychology Society*. Edinburgh (United Kingdom).
- López, F. J. & Gil Sáez-Hermúa, I. (2007). Entrenamiento de pilotos a partir del análisis experimental del comportamiento de pilotos expertos. *III Jornada AEPA de Psicología de la Aviación*. Madrid (Spain).
- Cobos, P. L., Flores, A. & López, F. J. (2008). Causal reasoning in clinicians during reading of clinical reports. *XXIX International Congress of Psychology*. Berlin (Germany).
- Morís, J., Luque, D., Cobos, P. L. & López, F. J. (2008). Don't tell me, show me: using priming measures in human associative learning. *14th. Biennial Meeting of the International Society for Comparative Psychology*. Buenos Aires (Argentina).
- López, F. J., Luque, D., Cobos, P. L. & Morís, J. (2008). Causal learning without causal judgments. *14th. Biennial Meeting of the International Society for Comparative Psychology*. Buenos Aires (Argentina).
- Morís, J., Luque, D., Cobos, P. L. & López, F. J. (2008). Human associative learning measured using a recognition priming paradigm. *XX International meeting of Spanish Society of Comparative Psychology*. Bilbao (Spain).

- Luque, D., Orgaz, C., Morís, J., Cobos, P. L., López, F. J. & Matute, H. (2008). Backward blocking and interference between cues in non-causal human learning. *XX International meeting of Spanish Society of Comparative Psychology*. Bilbao (Spain).
- Luque, D., Morís, J., Cobos, P. L. & López, F. J. (2008). Interference between cues of the same outcome in non-causal human predictive learning. *31st Annual Conference of the Society for the Quantitative Analyses of Behavior*. Chicago (United States).
- González-Martín, E., Cobos, P. L., López, F. J., Luque, D. & Morís, J. (2008). The addition of interference between outcomes trials reduces cue interaction effects. *31st Annual Conference of the Society for the Quantitative Analyses of Behavior*. Chicago (United States).
- Morís, J., Luque, D., Cobos, P. L. & López, F. J. (2008). Retrospective interference in two human learning paradigms. *XII Associative Learning Symposium*. Gregynog (United Kingdom).
- Luque, D., Morís, J., Cobos, P. L. & López, F. J. (2009). Spontaneous recovery from Interference between Cues but not from Backward Blocking. *32st Annual Conference of the Society for the Quantitative Analyses of Behavior*. Phoenix (United States).
- Cobos, P. L., Flores, A., González-Martín, E., López, F. J. & Godoy, A. (2009). Causal reasoning during reading of clinical reports in clinicians. *IV European Workshop Causal Reasoning in Clinical Decision Making*. Málaga (Spain).
- Morís J., Luque, D., Cobos P. L. & López F. J. (2010). Backward blocking effect can be found using recognition priming based measures. *XXII International meeting of Spanish Society of Comparative Psychology*. Almería (Spain).
- Morís, J., Luque, D., Cobos, P. L. & López, F. J. (2010). Backward blocking associative representation measured with a recognition priming task. *15th. Biennial Meeting of the International Society for Comparative Psychology*. Hyogo (Japan).
- Morís, J., Cobos, P. L., Luque, D. & López, F. J. (2010). Direct measures of associative cue competition as evidenced from priming studies. *I Joint Conference of the Experimental Psychology Society (EPS) and the Spanish Experimental Psychology Society (SEPEX)*. Granada (Spain).
- Flores, A., Cobos, P. L. & López, F. J. (2010). Measuring causal reasoning in clinicians during reading of clinical reports. *I Joint Conference of the Experimental Psychology Society (EPS) and the Spanish Experimental Psychology Society (SEPEX)*. Granada (Spain).

- Orgaz, C., Vadillo, M. A., Luque, D., Cobos, P. L., Matute, H. & López, F. J. (2010). The role of outcome inhibition in interference between outcomes. *17th International Conference on Comparative Cognition*. Melbourne, FL. (United States).
- Luque, D., López, F. J., Marco-Pallarés, J., Càmarà, E. & Rodríguez-Fornells, A. (2011). Blocking effect as shown in the feedback related negativity. *ICON XI*. Palma de Mallorca (Spain).
- Cobos, P.L., Luque, D., Morís, J. & López, F. J. (2012). Propositional and associative accounts of learning: a question about cognitive architectures. *I Joint Meeting of the Spanish Society of Experimental Psychology and the Belgian Association for Psychological Sciences*. Liege (Belgium).
- Morís, J., Cobos, P. L., Luque, D. & López, F. J. (2012). Learning processes engaged during contingency learning measured with recognition priming comply with basic associative theories. *2nd. Joint Meeting of the Spanish Society of Comparative Psychology and the International Society for Comparative Psychology*. Jaén (Spain).
- Vadillo, M. A., Ortega-Castro, N., Orgaz, C., Luque, D., Cobos, P. L., López, F. J. & Matute, H. (2012). The role of inhibition in interference between cues and between outcomes: inhibitory associations or inhibited representations? *2nd. Joint Meeting of the Spanish Society of Comparative Psychology and the International Society for Comparative Psychology*. Jaén (Spain).
- Alonso-Bardón, R., Luque, D. & López, F.J. (2013). Cue duration modulates the effects produced by a change in cue-outcome contingencies. *XXV International meeting of Spanish Society of Comparative Psychology*. San Sebastián (Spain).
- López, F.J., Cobos, P.L., Flores, A., Morís, J. & Luque, D. (2013). Judgments and reading times as a measure of causal reasoning in the diagnosis of mental disorders. *First Symposium of the Society for the Advancement of Judgments and Decision Making Studies*. Granada (Spain).
- Cobos, P.L., Morís, J., Luque, D., Alonso, R. and López, F.J. (2014). The rise and fall and rise again? of associative processes in human contingency learning. *XVIII Associative Learning Symposium*. Gregynog (United Kingdom).
- Alonso, R., Luque, D. & López, F.J. (2014). The effect of verbal instructions in contingency learning depends on the time available to process the cue: evidence in favor of associative models. *XXV International meeting of Spanish Society of Comparative Psychology. First Portuguese-Spanish Comparative Psychology Society Meeting*. Braga (Portugal).

Alonso, R., Luque, D. & López, F.J. (2014). Procesos asociativos en el aprendizaje humano de contingencias: evidencia desde una tarea de respuesta señalada. *X Congress of the Spanish Experimental Psychology Society-IX Congress of the Spanish Society of Psychophysiology and Cognitive and Affective Neuroscience*. Murcia (Spain).

Doctoral Thesis supervision:

2008 David Luque Ruiz. *Interferencia retroactiva entre señales que predicen un mismo resultado en el aprendizaje causal humano*. University of Málaga (Spain). Awarded with distinction: *Summa cum laude*.

Co-supervisor: Pedro L. Cobos.

2010 Joaquín Morís Fernández. *Associative learning phenomena and associative repetition priming*. University of Málaga (Spain). Awarded with distinction: *Summa cum laude*.

Co-supervisor: Pedro L. Cobos.

2012 Estrella González Martín. *Implicación de procesos asociativos en fenómenos de interferencia retroactiva en el aprendizaje de relaciones de contingencia en humanos*. University of Málaga (Spain). Awarded with distinction: *Summa cum laude*.

Co-supervisor: Pedro L. Cobos.

Master Thesis supervision:

2011 Encarnación De Diego Bellón. *Influencia del conocimiento causal sobre los juicios de eficacia de los tratamientos de trastornos*. University of Málaga (Spain).

2014 Ainhoa Andrades Carol. *El carácter repetitivo y egodistónico del comportamiento compulsivo: una aproximación experimental desde la teoría de formación de hábitos*. University of Málaga (Spain).