

**Barbara Koslowski
Curriculum Vitae**

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EDUCATION

1963-67 Wayne State University, Detroit, Michigan
B.A. with Highest Honors in Psychology

1967-68 Institute of Child Development Graduate School
University of Minnesota, Minneapolis, Minnesota

1968-74 Laboratory of Human Development Graduate School
Harvard University, Cambridge Massachusetts
E.D. June, 1974

POSITIONS HELD

1971-72 Lecturer on Child Development
Eliot-Pearson Department of Child Study
Tufts University

1972-79 Assistant Professor
Department of Human Development and Family Studies
Cornell University

1979-present Associate Professor
Department of Human Development and Family Studies
Cornell University

BOOKS

Koslowski, B. 1996. Theory and Evidence: The development of scientific reasoning. MIT Press/Bradford Books, Cambridge, MA.

CHAPTERS

Koslowski, B. How explanation makes information evidentially relevant. In Robert Proctor and E. J. Capaldi (Eds.) *The Psychology of Science: Implicit and Explicit Reasoning*. Oxford University Press. In press.

Koslowski, B. The intersection of formal principles and non-formal background knowledge in scientific reasoning. In Greg Feist and Mike Gorman (Eds.) *Handbook of the Psychology of Science and Technology*. Springer. In press.

Koslowski, B. and Masnick, A. M. (2010) Causal Reasoning. In Goswami, U. (ed.) Handbook of Child Cognitive Development. (2nd edition) Oxford, Blackwell Publishers.

Koslowski, B., & Thompson, S. (2002) Theorizing is important, and collateral information constrains how well it is done. In Carruthers, P., Stich, S., and Siegal, M. (eds.) The Cognitive Bases of Science: Interdisciplinary Approach. Cambridge, Cambridge University Press.

Koslowski, B., & Masnick, A. (2002) Causal Reasoning. In Goswami, U. (ed.) Handbook of Child Cognitive Development. Oxford, Blackwell Publishers.

Condry, J. & Koslowski, B. 1978. Can Education be Made "Intrinsically Interesting" to Children. In L. Katz (ed.), Current Topics in Early Childhood Education, II, Norwood, NJ: Ablex Publishing Corporation.

Ginsburg, H. & Koslowski, B. 1976. "Cognitive Development." Annual Review of Psychology, 27: 29-61.

Brazelton, T.B., Koslowski, B. & Main, M. 1974. "The origins of reciprocity: The mother-infant interaction." In M. Lewis & L. Rosenblum (eds.), The effect of the infant on its caregiver. New York: John Wiley & Sons.

PAPERS

Koslowski, B., Marasia, J., Chelenza, M., Dublin, R. (2008) Information becomes evidence when an explanation can incorporate it into a causal framework. Cognitive Development, Vol. 23, Issue 4, October-December 2008, pp. 472-487: Special Issue on: Scientific reasoning: Where are we now?

Koslowski, B. & Maqueda, M. (1993). What is confirmation bias and when do people have it? Merrill-Palmer Quarterly invitational issue on "The Development of Rationality and Critical Thinking." Vol. 39 (1):104-130.

Koslowski, B., Okagaki, L., Lorenz, C., & Umbach, D. 1989. When covariation isn't enough: The role of causal mechanism, sampling method and sample size in causal reasoning. Child Development, 60: 1316-1327.

Okagaki, L. & Koslowski, B. 1987. Another look at analogies and problem solving. Journal of Creative Behavior, 21.

- Koslowski, B. & Okagaki, L. 1986. Non-Humean indices of causation in problem-solving situations: Causal mechanism, analogous effects, and the status of rival alternative accounts. Child Development, 57: 1100-1108.
- Koslowski, B., Spilton, D., & Snipper, A. 1981. Children's beliefs about instances of mechanical and electrical causation. Journal of Applied Developmental Psychology, 2: 189-210.
- Koslowski, B. 1980. Quantitative and qualitative changes in the development of seriation. Merrill-Palmer Quarterly, 26, (4): 391-405.
- Koslowski, B. 1979. Environmental factors and the organization of developmental changes. The Behavioral and Brain Sciences, 2, (1): 143.
- Brazelton, T.B., Koslowski, B. & Tronick, E. 1976. Neonatal behavior among urban Zambians and Americans. Journal Academy of Child Psychiatry, 15: 97-108.
- Koslowski, B. 1973. An instrument for assessing discriminative ability in 1- to 3-year-old children. In Burton White and Jean Watts (eds.), Experience and Environment: Major influences on the development of the young child. Prentice-Hall.
- Brazelton, T.B., et al. 1973. Neonatal Behavioral Assessment Scale. London: William Heinemann Medical Books Ltd.
- Koslowski, B. & Bruner, J.S. 1972. Learning to use a lever. Child Development, 43, (3): 790-799.
- Bruner, J.S. & Koslowski, B. 1972. Visually preadapted constituents of manipulatory action. Perception, 1: 3-14.

RESEARCH IN PROGRESS

- Barnett, S., & Koslowski, B. Expertise based on broad theoretical understanding transfers to novel situations better than does expertise based on narrow practical experience.
- Masnick, A., & Koslowski, B. People do change their beliefs when it's pointed out to them that their beliefs are inconsistent.
- Swiderek, M. & Koslowski, B. People do change a general belief if the subsidiary beliefs that support it are undermined.
- Koslowski, B., Rosenblum, T., & Barnett, S. Learning a principle is not enough; transfer requires a heuristic to explain how the principle is realized in a particular situation.
- Koslowski, B., Masnick, A, Thompson, S., & Barnett, S. The role of mechanism, contexts of generalization and theoretical integration in making explanations more or less plausible.
- Koslowski, B., Thompson, S., Masnick, A., & Barnett, S. Spontaneous questions and explanations.
- Koslowski, B., Masnick, A., Swiderek, M., Rosenblum, T., Thompson, S., & Barnett, S. Formal models do not describe ideal strategies for reasoning about the empirical world.

PROFESSIONAL PRESENTATIONS

- Koslowski, B. How explanation makes information evidentially relevant. Invited paper presented at the Conference on the Psychology of Science: implicit and explicit reasoning, Purdue University, June 4 – 5, 2010.
- Koslowski, B. How development might inform us about how to study interactional expertise. Paper presented at the joint meeting of the International Society for the Psychology of Science and Technology and the Studies of Experience and Expertise, August 8-9, 2010, Berkeley, California.
- Koslowski, B. Technical and Conceptual aspects of scientific reasoning. Paper presented at the biennial meetings of the International Society for Psychology of Science and Technology. August 6-7, 2010.
- Boyd, W. C., Boyd, R. N., Koslowski, B. Formal and non-formal reasoning in science. Paper presented at the University of Southern California, 2010.
- Koslowski, B., Beckmann, L., Bowers, E., DeVito, J., Wonderly, B., & Vermeulen, F. The cognitive basis for confirmation bias is more nuanced than one might expect. Paper presented at the meetings of the International Society for the Psychology of Science and Technology, Berlin, 2008.
- Koslowski, B. Scientific reasoning is not necessarily plagued by confirmation bias. Paper presented at the meetings of the International Congress of Psychology, as part of a symposium on Situating Psychology of Science, Berlin, 2008.
- Koslowski, B. A motivation to confirm is not necessarily problematic. Poster presented at the meetings of the International Congress of Psychology, Berlin, 2008
- Koslowski, B. Causality, science education, and scientific reasoning. Paper presented as part of a roundtable discussion symposium at the biennial meetings of the Society for Research in Child Development, Cambridge, MA, 2007.
- Ershova, E. and Koslowski, B. Children's generated explanations: "Promiscuous teleology, Aristotelian teleology, and the effect of How- vs. Why-questions. Paper presented at the biennial meetings of the Society for Research in Child Development, Atlanta, April, 2005.
- Ershova, E. and Koslowski, B. Children's generated explanations do not reflect teleological thinking. Paper to be presented at the annual meetings of the American Psychological Society, Chicago, May, 2004.
- Koslowski, B., Marasia, J., Chelenza, M, and Dublin, R. Information becomes evidence when an alternative explanation can account for it. Paper to be presented at the annual meetings of the American Psychological Society, Chicago, May, 2004.

- Koslowski, B., Form and content in scientific reasoning: What develops and what doesn't? Paper presented as part of a symposium on Four Perspectives on the Development of Scientific Reasoning, Annual Meetings of the Jean Piaget Society, Berkeley, CA, May, 2001.
- Masnack, A., and Koslowski, B. Attitude change and reasoning. Proceedings of the Cognitive Science Society, 2001.
- Koslowski, B. Theories are good and good theories are even better. Invited talk presented at the conference on interdisciplinary approaches to the Cognitive Bases of Science, Sheffield, England, July, 2000.
- Koslowski, B. Formal rules don't guarantee good theories. Invited talk given to the Cognitive Science Center at SUNY Buffalo, September 20, 2000.
- Koslowski, B., Masnick, A., Thompson, S., & Barnett, S. What makes theories or explanations convincing? Paper presented at the biennial meetings of the Society for Research in Child Development, Washington, D.C., April, 1997.
- Koslowski, B., Rosenblum, T., & Barnett, S. Conceptual versus technical information and transfer. Paper presented at the biennial meetings of the Society for Research in Child Development, Washington, D.C., April, 1997.
- Koslowski, B., Susman, A. & Serling, J. 1991. Conceptual vs. technical understanding of evidence in scientific reasoning. Paper presented as part of a symposium on Evidence Evaluation and Conceptual Change. Biennial Meetings of the Society for Research in Child Development.
- Koslowski, B., Okagaki, L., Hutt, M., & Condry, K. 1991. Adolescents' and college students' understanding of internal and external validity. Paper presented at the Biennial Meeting of the Society for Research in Child Development.
- Koslowski, B., Gravani, E., Adams, M., & Umbach, D. 1989. Problem solving: What sort of information do subjects want to know? Presented at the 19th Symposium of the Jean Piaget Society.
- Koslowski, B., Bence, P., & Herse, N. 1989. The role of causal mechanism and of sample size in causal judgments. Paper presented at the Society for Research in Child Development Annual Meeting.
- Koslowski, B. 1988. Non-formal operational adolescent cognition: From formal models to real world applications. Paper presented as part of an invited symposium on Contemporary Perspectives on Adolescent Cognition: From Formal Modes to Real-World Applications at the Society for Research in Adolescence, Alexandria, VA.
- Koslowski, B., Bence, P. & Herse, N. 1988. When does correlation suggest cause: The role of causal mechanism and frequency of correlation. Paper presented at Jean Piaget Society Annual Meeting, Philadelphia.
- Koslowski, B., Bence, P., Adams, M., & Herse, N. 1987. Evaluating explanations in light of alternative accounts and anomalous information. Paper presented at the Annual Meetings of the Jean Piaget Society, Philadelphia.
- Koslowski, B., Bence, P., Tudge, J. & Adams, M. 1987. Invoking additional causes when alternative causes are present or absent. Paper presented to the Society for Research in Child Development, Baltimore.

- Koslowski, B. 1987. Evaluating explanations in light of non-congruent data: The effects of theoretically motivated vs. random exceptions. Paper presented as part of a symposium on the Development of Skills in the Evaluation of Causal and Correlational Evidence at the Society for Research in Child Development, Baltimore.
- Koslowski, B., Okagaki, L. & Lorenz, C. 1985. When does the presence or absence of covariation indicate the absence or presence of causation? Paper presented to the Society for Research in Child Development, Toronto.
- Koslowski, B. & Tudge, J. 1985. Evaluating explanations in light of alternative account. Paper presented to the Society for Research in Child Development, Toronto.
- Koslowski, B., Lorenz, C. & Okagaki, L. 1984. When are Humean indices of causation overridden? Proceedings of the Annual Meetings of the American Psychological Association, Toronto.
- Koslowski, B., Lorenz, C. & Okagaki, L. 1984. When is covariation not evidence of causality? Proceedings of the Meetings of the Jean Piaget Society, Philadelphia.
- Koslowski, B. 1983. Do adolescents and young adults think like logicians or like scientists? University of Massachusetts Medical School, Worcester, MA.
- Koslowski, B. 1983. Limitations of formal-logical models of reasoning. Paper presented to the Piaget Society, Philadelphia.
- Koslowski, B., Okagaki, L. & McLaughlin, J. 1983. Genuine and apparent syncretic thinking in adolescents and young adults. Paper presented in the Piaget Society, Philadelphia.
- Koslowski, B. & Okagaki, L. 1983. Identifying causally relevant factors in a problem situation. Paper presented to the Society for Research in Child Development, Detroit.
- Koslowski, B., McLaughlin, J. & Clifford, T. 1982. Principled Parsimony: When is the Simpler Account Actually Preferred? Paper presented to the American Psychological Association, Washington, DC.
- Koslowski, B. & Okagaki, L. 1982. Identifying information likely to be relevant to solving a problem. Paper presented to the American Psychological Association, Washington, DC.
- Koslowski, B. & Okagaki, L. 1982. Critical thinking: Going beyond formal models. Paper presented to NERA, Ellensville, NY.
- Koslowski, B. & Pierce, A. 1981. Children's spontaneous explanations and requests for explanations. Paper presented to the Society for Research in Child Development.
- Gerson, L., Koslowski, B. & Glantz, M. 1981. The relations between maternal employment status and mother-child interaction in a child-care center. Paper presented to the Eastern Psychological Association.
- Koslowski, B. & Gerson, L. 1977. Group differences in cognition: A proposal for an alternative framework. Paper presented to the Conference on Research Perspectives in the Ecology of Human Development, Ithaca, NY

Colloquium on Children's conception of causation. 1975. Implications for stage theories of development. Presented to Department of Psychology, Smith College, Northampton, MA

Colloquium on Children's conception of causation. 1975. Presented to Graduate Program in Development Psychology, Graduate Center, City University of New York

Koslowski, B. 1973. The development of seriation. Paper presented to the Society for Research in Child Development.

Brazelton, T.B., Koslowski, B., & Tronick, E. 1971. Neonatal differences between Zambian and American infants and the relationship of these differences to childrearing practices. Paper presented to the Society for Research in Child Development.