

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME <b>Smith, Linda B.</b>		POSITION TITLE <b>Chancellor's Professor</b>	
eRA COMMONS USER NAME (credential, e.g., agency login) <b>smith4</b>		<b>Dept. of Psychological and Brain Sciences</b> <b>Indiana University - Bloomington</b>	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
University of Wisconsin – Madison	B.S.	1973	Psychology
University of Pennsylvania	PhD	1977	Psychology

Please refer to the application instructions in order to complete sections A, B, and C of the Biographical Sketch.

**A. Positions and Honors.** List in chronological order previous positions, concluding with your present position. List any honors. Include present membership on any Federal Government public advisory committee.

**Positions**

1977 – present      Department of Psychology, Indiana University, Bloomington

**Selected Honors**

1982      Phi Beta Kappa (Lilly Post-doctoral Teaching Fellow-Indiana University)  
 1984      James McKeen Cattell Fund Sabbatical Award  
 1984-1989      Research Career Development Award – NICHD  
 1985      Early Career Contribution, American Psychological Association  
 1990, 1991, 1992      Honors Faculty Fellow, Indiana University  
 1993-1994      Lilly Faculty Open Fellowship  
 1997      Sonneborn Award  
 1997      Chancellor's Professor  
 2006      Society of Experimental Psychologists  
 2007      American Academy of Arts and Sciences  
 2007      Fellow APS  
 2007      Fellow Cognitive Science  
 2008      Distinguished Professor

**Appointments**

1983-1986      National Science Foundation, Memory & Cognitive Processes Panel  
 1989-1991      National Science Foundation, Advisory Committee for the Directorate for Biological, Behavioral and Social Sciences  
 1989-1993      National Institute of Mental Health, Cognition, Emotion and Personality Panel  
 1990-1993      Honors Faculty, Indiana University  
 1994-1997      Associate Editor, Psychological Review  
 1997      National Institutes of Health, Scientific Review Advisory Committee  
 2002-2006      National Institutes of Health, Study Section (LCOM),

**B. Selected publications prior to 2004, all since 2004 (lifetime, over 130)**

- Smith, L. B. (1989). A model of perceptual classification in children and adults. **Psychological Review**, 96, 125-144.
- Smith, L. B., & Sera, M. (1992) A developmental analysis of the polar structure of dimensions. **Cognitive Psychology**, 24, 99-142.
- Thelen, E., & Smith, L. B. (1994) A dynamical systems approach to the development of cognition and action. Bradford Books, **MIT Press**.
- Smith, L.B., Jones, S. & Landau, B. (1996) Naming in young children: A dumb attentional mechanism? **Cognition** 60, 143-171.
- Smith, L.B., Jones, S. & Landau, B. (1996) Naming in young children: A dumb attentional mechanism? **Cognition** 60, 143-171.
- Smith, L.B., Thelen, E., Titzer, R., & McLin, D. (1999) Knowing in the context of acting: The task dynamics of the A not-B error. **Psychological Review**, 106, 235-260.
- Smith, L. B. (2003) Learning to Recognize Objects. **Psychological Science**, 14 (3)244- 251.
- Smith, L.B. & Thelen, E. (2003) Development as a dynamic system. **Trends in Cognitive Science**, 7, 343-348.
- Smith, L.B. (2003) Different is good: connectionist and dynamic systems theory are complementary emergentist approaches to development. **Developmental Science**, 6, 434-439.
- Colunga, E, Smith, L.B. (2003) The emergence of abstract ideas: Evidence from networks and babies. **Philosophical Transactions by the Royal Society B**. Theme Issue: 'The abstraction paths: from experience to concept'. L. Saitta (Ed) 358(1435) pp. 1205-1214
- Sandhofer, C. & Smith, L.B. (2004) Perceptual complexity and form class cues in novel word extension tasks: how 4 year old children interpret novel adjectives and count nouns. **Developmental Science**, 7, 378-388.
- Gershkoff-Stowe, L., & Smith, L. B. (2004). Shape and the first hundred nouns. **Child development**, 75(4), 1098-1114.
- Smith, L.B. (2004) Shape: A developmental product. In L. Carlson & E. van der Zee, Functional features in language and space. **Oxford University Press**, 235-256.
- Smith, L.B. & Gasser, M. (2005) The development of embodied cognition: Six lessons from babies. **Artificial Life**, 11, 13-30.
- Smith, Linda B. (2005) Action alters perceived shape. **Cognitive Science**, 29, 665-679.
- Colunga, E., & Smith, L. B. (2005). From the lexicon to expectations about kinds: A role for associative learning. **Psychological review**, 112(2), 347-382.
- Jones, S. S., & Smith, L. B. (2005). Object name learning and object perception: A deficit in late talkers. **Journal of child language**, 32(1), 223-240.
- Samuelson, L. K., & Smith, L. B. (2005). They call it like they see it: Spontaneous naming and attention to shape. **Developmental Science**, 8(2), 182-198.
- Yoshida, H., & Smith, L. B. (2005). Linguistic cues enhance the learning of perceptual cues. **Psychological Science**, 16(2), 90-95.
- Smith, L. B. (2005). Cognition as a dynamic system: Principles from embodiment. **Developmental Review**, 25(3-4), 278-298.
- Clearfield, M. W., Diedrich, F. J., Smith, L. B., & Thelen, E. (2006). Young infants reach correctly in A-not-B tasks: On the development of stability and perseveration. **Infant Behavior & Development**, 29(3), 435-444.
- Sheya, A., & Smith, L. B. (2006). Perceptual features and the development of conceptual knowledge. **Journal of Cognition and Development**, 7(4), 455-476.
- Gershkoff-Stowe, L., Connell, B., & Smith, L. (2006). Priming overgeneralizations in two- and four-year-old children. **Journal of child language**, 33(3), 461-486.
- Smith, L. B., & Samuelson, L. (2006). An attentional learning account of the shape bias. *Developmental psychology*, 42(6), 1339-1343.
- Thelen, E. & Smith, L. B. (2006). *Dynamic systems theories*. **Handbook of Child Psychology**, Hoboken, NJ, US: John Wiley & Sons Inc.
- Smith, L.B. & Breazeal, C. (2007) The dynamic lift of developmental process. **Developmental Science**, 10, 61-68.
- Smith, L. B., Maouene, J., Hidaka, S. (2007) The body and children's word learning. In J. Plummer & J. Spencer (eds.) The emerging spatial mind. New York: **Oxford University Press**, 168-192.
- Yu, C., & Smith, L. B. (2007). Rapid word learning under uncertainty via cross-situational statistics. **Psychological Science**, 18(5), 414-420.
- Zapf, J. A., & Smith, L. B. (2007). When do children generalize the plural to novel nouns? **First Language**, 27(1), 53-73
- Sandhofer, C., & Smith, L. B. (2007). Learning adjectives in the real world: How learning nouns impedes learning adjectives. **Language Learning and Development**, 3(3), 233-267.

- Laakso, A., & Smith, L. B. (2007). Pronouns and verbs in adult speech to children: A corpus analysis *Journal of Child Language*, 34, 725 – 763.
- Barsalou, L. Breazeal, C. & Smith, L.B. (2007). Cognition as coordinated noncognition. *Language and Cognitive Processing*, 8, 79-91.
- Son, J. Y., Smith, L. B., & Goldstone, R. L. (2008). Simplicity and generalization: Short-cutting abstraction in children's object categorizations. *Cognition*, 108(3), 626-638.
- Zapf, J. A., & Smith, L. B. (2008). Meaning matters in children's plural productions. *Cognition*, 108(2), 466-466.
- Pereira, A. F., Smith, L. B., & Yu, C. (2008). Social coordination in toddler's word learning: Interacting systems of perception and action. *Connection Science*, 20(2-3), 73-73.
- Yoshida, H., & Smith, L. B. (2008). What's in view for toddlers? Using a head camera to study visual experience. *Infancy*, 13(3), 229-229.
- Perry, L. K., Smith, L. B., & Hockema, S. A. (2008). Representational momentum and children's sensori-motor representations of objects. *Developmental Science*, 11(3), F17-F17.
- Smith, L., & Yu, C. (2008). Infants rapidly learn word-referent mappings via cross-situational statistics. *Cognition*, 106(3), 1558-1558.
- Colunga, E., & Smith, L. B. (2008). Knowledge embedded in process: The self-organization of skilled noun learning. *Developmental Science*, 11(2), 195-195.
- Maouene, J., Hidaki, S., & Smith, L.B. (2008) Body-parts and early learned verbs. *Cognitive Science*, 7, 1200-1216.
- Smith, L.B. (2009) Dynamic executives. (commentary) *Developmental Science*, 12, 22-23.
- Clearfield, M. Dineva, E., Smith, L.B., Diedrich, F., & Thelen, E. (2009), Cue salience and infant perseverative reaching: Tests of the Dynamical Field Theory. *Developmental Science*. 12, 26-40.
- Pereira, A. & Smith, L.B. (2009) Developmental changes in visual object recognition between 18 and 24 months of age. *Developmental Science*. 12, 57-80.
- Hockema, S. & Smith, L.B. (in press) Learning language, outside-in and in-side out. *Linguistics*.

**C. Research Support.** List selected ongoing or completed (during the last three years) research projects (federal and non-federal support). Begin with the projects that are most relevant to the research proposed in this application. Briefly indicate the overall goals of the projects and your role (e.g. PI, Co-Investigator, Consultant) in the research project. Do not list award amounts or percent effort in projects.

#### Ongoing Research Support

R01 HD28675 Smith, L. (PI)  
NIH

8/01/05– 7/31/10

#### **The Shape Bias in Children's Word Learning**

This project investigates the origins and nature of children's attention to shape in naming tasks. This research concentrates on the developmental period between 12 and 24 months and particularly the acceleration in new object name acquisitions that typically occurs at around 24 months. A substantial portion of the research involves a comparison of typically developing and late talking children.

Role: PI

R305A080980 Smith, L. (PI)  
DOE/IES

9/01/08 – 8/31/11

#### **Making Sense of Concrete Models for Mathematics**

This research examines how children's direct contact and exact movements with math manipulatives (small blocks that may be assembled into ones, tens, hundreds) may be related to their learning about place-holders and carrying operations in addition and subtraction.

Role: PI

R01 HD057077-01 James (PI)  
NIH

2008 - 2013

**Children's actions and object recognition**

This research examines how 12 to 24 month old children's manual interactions with objects supports the formation of abstract representations of 3-dimensional object shape and support the visual recognition of basic level categories.

Role: Co-PI

R01 HD05602 Yu (PI)  
NIH

9/01/08 – 8/31/12

**Cross-Situational Statistical Word Learning: Behaviors, Mechanisms and Constraints**

This project investigates infants learning of word-referent mappings and the use of cross word statistics to hone in on these mappings even in the face of the referential ambiguity characteristic of real world learning contexts.

Role: Co-PI

Completed Research Support

R01 MH60200 Smith, L. (PI)  
NIH

9/01/03 – 8/31/08

**A Cross-Linguistic Study of Nominal Category Formation**

This research investigated English-speaking and Japanese-speaking children's noun learning. It specifically Studied the regularities that characterize early lexicons and the role they play in category formation.

Role: PI

1R21 EY017843 Smith, L. (PI)  
NIH

2/01/07 – 1/31/09

**Measuring Active Vision in Toddlers and Young Children**

This research will study active vision in children 10 to 36 months of age by measuring the visual input from the first person view. This is done by asking the child to wear a headband with a small camera that records the visual information as the child moves and engages in play with toys. In addition, we will place sensors on the child's head, shoulders and hands to more precisely measure the coupling of visual input and action.

Role: PI