

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF IOWA**

THE ARC OF IOWA et al.,

Plaintiffs,

v.

KIM REYNOLDS et al.,

Defendants.

Case No. 4:21-cv-264

DECLARATION OF DAVID J.
LEWKOWICZ, PhD

I, David J. Lewkowicz, declare as follows:

1. I am a Senior Scientist at Haskins Laboratories and a Professor Adjunct in the Yale Child Study Center at the Yale School of Medicine.
2. I received my BA from Brandeis University, and my PhD from the City University of New York. I completed a postdoctoral fellowship in child mental health at the Albert Einstein College of Medicine of Yeshiva University.
3. I have served as President and Secretary of the International Congress on Infant Studies. I am also an elected Fellow of the Association for Psychological Science as well as an elected Fellow of the American Psychological Association.
4. I investigate the development of speech, language, and the perceptual and attentional processes underlying them in infants, preschool children, and adults. My research has been and continues to be supported by highly competitive research grants from the National Institutes of Health as well as from the National Science Foundation.
5. The primary focus of my research is perceptual and cognitive development in human infants and young children, with a specific interest in the development of attention, multisensory perception and integration, and sequence/statistical learning and the role

that these fundamental processes play in the development of speech, language, and general cognitive abilities.

6. I have published widely in the psychological literature and especially in developmental psychology and psychobiology. One of my current and primary interests is concerned with the way that developmental changes in selective attention mechanisms during the first years of life mediate acquisition of speech and language.
7. My curriculum vitae, including a list of my publications, is attached as Exhibit A.
8. I am submitting this declaration in support of enjoining those provisions of HF847 which prohibit Iowa schools from implementing universal masking as consistent with public health recommendations to reduce the transmission of COVID-19 among schoolchildren. This declaration focuses on the ways in which masks do and do not impact face perception (including emotions), speech and language perception and learning, and ways in which adults and children can and do compensate for the short-term deprivation of some facial information that masks cause. My testimony is based on my training, education, extensive research and knowledge of the professional literature in my field, and my experience with infants and young children during a career spanning over 40 years.
9. In my professional opinion, concern regarding the impact of masks on children's cognitive development do not justify a prohibition on masking in schools as necessary to reduce the transmission of COVID-19 among school children, in accordance with guidance issued by the CDC and American Academy of Pediatricians.¹

¹ See, e.g., *American Academy of Pediatrics Updates Recommendations for Opening Schools in Fall 2021*, Am. Acad. Pediatrics (July 19, 2021), <https://www.aap.org/en/news-room/news-releases/aap/2021/american-academy-of-pediatrics-updates-recommendations-for-opening->

10. In summary, the specific issue of the impact of masks on speech and language learning is complex. Based on the research conducted in my laboratory as well as in other laboratories, it may be reasonable to argue that masks may make it more difficult for babies and very young children under the age of two to process and learn speech and language. The fact is, however, that there a number of reasons why masks are not likely to hinder speech and language development in young school age children: (1) most of the focus on the mouth as crucial for language development in children occurs in the first two years of a child's life, long before children are in school, (2) there are plenty of opportunities for parents and caretakers to compensate for masking at home, where young children get to see full faces producing not only auditory speech but audiovisual (i.e., audible and simultaneously visible) speech, (3) even though school-age children lipread under challenging conditions (e.g., noise), they are not as good as adults are in extracting useful information from the visible speech that they would normally be able to access through lipreading; this means that they rely less on the greater perceptual salience of audiovisual as opposed to heard speech, (4) in many parts of the world, children are used to seeing people wearing masks or face coverings for religious, cultural, or health reasons and their speech and language development is not adversely affected, and (5) research shows clearly that the younger the brain, the greater its plasticity, meaning that the younger the brain the more it is capable of making up for specific deprivations such as, for example, not being able to see the bottom half of another person's face.

schools-in-fall-2021/; *Guidance for Covid-19 Prevention in K-12 Schools*, Ctrs. for Disease Control & Prevention (Aug. 5, 2021 update), <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>.

11. Brain development begins shortly after conception and continues for about 20 years.

The primary characteristics of this process are the emergence of neurons (the building blocks of the nervous system), synapses (the connections between neurons), and ultimately the complex neural circuits and networks that support all of our sensory, perceptual, cognitive, and social capacities. Critically, the developmental emergence of these circuits and networks depends on the constant interaction between biological and environmental factors. The latter are the sorts of events and their sensory aspects that children experience in their daily lives. These everyday sensory experiences tune infants' and young children's perceptual and attentional capacities and, thus, play a critical role in the development of children's sensory, perceptual, cognitive, and social abilities. These abilities include face perception and the communicative information that faces convey via speech, language, and emotional signals during social interactions. Importantly, brain development is very rapid during the first 3 years of life and, even though it slows down during the subsequent years of early and middle childhood, it still proceeds at a rapid pace throughout much of childhood. This rapid growth and the constant interaction between the biological and environmental factors underlying brain growth and development imbue the growing brain with a great deal of plasticity and is the basis for the prodigious learning abilities of young children (Werker & Hensch, 2015). The neural and behavioral plasticity inherent in early development imbues young children with far greater cognitive flexibility and the impressive capacity to adapt to changing conditions, challenges, and deprivations. As a result, younger children are far more adaptable to their environment than are older children or adults. These general principles of brain and behavioral development and

the plasticity that it affords strongly suggest that masks worn by others will not have any long-term detrimental consequences for young children's ability to perceive identity, emotional, and visual-speech cues in a social partner's/interlocutor's face. One example that illustrates this is cited in the next section describing our latest findings from a study of children's ability to discriminate different people's faces.

12. It is reasonable to believe that masks may hinder the ability of babies and very young children to observe speech and language and to learn it as they normally would absent a mask, but most of the focus on the mouth, from a developmental perspective, occurs in the first two years of life, long before children are in school. My research shows that babies and children younger than two see and hear communicative signals and learn to attach meanings to them through their daily interactions with adult caregivers and social partners. Around the age of 6 to 8 months, infants begin to shift their gaze from a speaker's eyes to the speaker's mouth when watching and listening to another person speak. (Lewkowicz and Hansen-Tift 2012). This shift "enables infants to gain access to redundant audiovisual speech cues that enable them to learn their native speech forms." (*Id.*) This shift from focusing on the eyes to looking at both the eyes and the mouth of a speaker coincides with the onset of canonical babbling, when "greater attention to a talker's mouth . . . would be advantageous from the standpoint of imitation." (*Id.*) By 12 months of age, infants "acquire sufficient expertise in their native language" such that imitation is less crucial, and their focus shifts back to the speaker's eyes. (*Id.*). This shift back to focusing on eyes is crucial to understanding language and social cues, as infants learn that "the eyes of social partners provide crucial social and deictic perceptual cues that are essential for further cognitive

- development.” (*Id.*). Research from other laboratories has also shown that lipreading in infancy is correlated with the development of speech and language in subsequent months (Tenenbaum, Sobel, Sheinkopf, Shah, Malle, and Morgan 2015).
13. During the second year of development, children turn their focus back to speaker’s mouths as they “enter the word acquisition phase” of their development, suggesting that an increased focus on the mouth of a speaker assists them in acquiring new words. (Boisferon, Tift, Minar, and Lewkowicz 2018).
14. My research has also shown that bilingual babies begin focusing on a speaker’s mouth earlier in development and maintain that focus later in their development, than do monolingual babies. (Pons, Bosch, and Lewkowicz 2015). This suggests that the earlier and longer lasting focus on mouths in bilingual babies is necessary “to support their dual-language acquisition process.” (*Id.*) Likewise, despite the shift of focus back towards the eyes at 12 months of development, 12 month old infants spent more time looking at the mouths of speakers when they were speaking a non-native language than when the speaker was using the native language of the infant.² (*Id.*)
15. While infants experience two phases during development when the ability to focus on the mouth of a speaker takes precedent over the speaker’s eyes, children beyond two years of age through adulthood focus their attention much more on the eyes of a social partner than on the mouth, and only shift their focus to the mouth in circumstances

² Nonetheless, this does not mean that infants and children under two cannot compensate for the missing information due to masking. This is because there are plenty of opportunities for parents and caretakers to compensate for masking at home, where children get to see full faces producing not only auditory speech but audiovisual (i.e., audible and simultaneously visible) speech.

where the speaker is difficult to understand or when they are learning more than one language (Lewkowicz and Hansen-Tift 2012).

16. Language development in school age children is primarily auditory, as well as focused on learning to read and write, rather than visual. Masking doesn't impair this type of language development. School age children are not as good as adults in extracting useful information from the visible speech that they would normally observe through lipreading, which means that they rely less on the greater perceptual salience of lipread/audiovisual speech compared to heard speech. (Lalonde and Holt 2015). Moreover, we have recently found in our studies that, unlike adults who are excellent at matching heard speech with visible speech, school-age children are poor at this task (Lewkowicz, in preparation). This means that even though children have access to visible speech in unmasked faces, they do not take advantage of it the way that adults do to enhance their speech processing.

17. Finally, two real-world examples illustrate children's ability to overcome the deprivation resulting from half the face being covered by a mask. First, it is noteworthy that, despite the fact that in many parts of the world children see people wearing masks or face coverings for religious, cultural, or health reasons on a regular basis, their speech and language development is not adversely affected. Second, blind children acquire language in a similar way that seeing children do. (Pérez-Pereira, *Language Development in Blind Children* (2006).

18. In addition to speech and language development, there are reasons to believe that face perception among young school age children is not adversely affected by masks. This is evident from recent findings from a just-completed study in my lab. In this study, we

examined 4-7 year-old children's ability to discriminate different faces after they spent considerable amounts of their time in masked environments during the pandemic. We found that the children successfully discriminated among different faces on the basis of identity cues just like children who have not spent any time in masked environments. This demonstrates that young children's ability to recognize other people is not adversely affected by seeing only partial faces when they find themselves in masked environments. This research is explained below.

19. We have just finished collecting data in a study in which we investigated whether face perception in 4-7-year-old children is negatively affected by daily exposure to other kids and adults wearing masks. We used a classic technique that involves presenting two side-by-side faces both of which are composites of either the same person's face or two different people's faces. Specifically, each composite face consists of a top and bottom half. If the top halves of the side-by-side faces are identical but each is combined with a different person's bottom half, adults report that the two top halves are different even though they are identical. This is because adults respond to faces as one unified, holistic object rather than as different parts of a single object. When we showed these types of composite faces to 4-7 year-old children and asked them to tell us if they were the same or different, they responded in a manner similar to adults. That is, like adults, children often responded erroneously that the top halves of the two faces were different as long as their bottom halves differed. In other words, the children in our study exhibited holistic perception of faces just like adults do. These findings indicate that, despite being exposed to people wearing masks and, thus, despite being deprived of seeing whole faces for part of their day, children's ability to discriminate

between different faces is not adversely affected by this deprivation. This research strongly suggests that masks worn by others will not have any long-term detrimental consequences for young children's ability to perceive identity, emotional, and visual-speech cues in a social partner's/interlocutor's face.

20. Finally, much of the necessary research to determine whether masks are detrimental to children's ability to perceive other features of facial information such as, for example, people's emotional state has not been done yet. Nonetheless, it is highly unlikely that masks will have any long-term detrimental effects on children recognition of emotional expressions in others. This is mainly because, like adults, children tend to focus their selective attention on a person's eyes when they are learning how to interact appropriately with other social partners (Roberson, Kikutani, Döge, Whitaker, and Majid 2012). In addition, many emotional and other socially important perceptual cues are produced by eye and head movements as well as the tone of a person's voice. All of these cues can be easily perceived in another person who is wearing a mask and, thus, this is not likely to affect young children's ability to judge other people's emotional state accurately.
21. Based on my research and knowledge of the relevant science, as set forth above, concerns regarding the impact of masks on school age children's speech and development do not warrant limitations on schools from requiring masking, consistent with the recommendations of the Center for Disease Control and American Academy of Pediatrics, in order to protect children from COVID-19.
22. I certify under penalty of perjury under the laws of the United States that the preceding is true and correct to the best of my knowledge.

Dated this 26th day of September, 2021.

David Lewkowicz

David J. Lewkowicz, PhD

EXHIBIT A

Curriculum Vitae
David J. Lewkowicz
Haskins Laboratories, New Haven, Connecticut
Child Study Center, Yale University School of Medicine

Contact Information

Address: Haskins Laboratories
300 George St.
New Haven, CT 06511, USA

Phone: 203-998-2708 (cell)

Email: david.lewkowicz@yale.edu

Education

1979 - 1980 Postdoctoral Fellow, Department of Psychiatry, Albert Einstein College of Medicine, Yeshiva University, Bronx, NY

1974 - 1979 Ph.D., *Biopsychology*, City University of New York, NY (Advisor: Gerald Turkewitz)

1970 - 1974 BA, *Psychology* (with honors), Brandeis University, Waltham, MA

Positions held

2019 - Present Senior Research Scientist, Haskins Laboratories, New Haven, CT

2019 - Present Professor Adjunct, Child Study Center, Yale University School of Medicine, New Haven, CT

2014 - 2019 Professor, Department of Communication Sciences & Disorders, Northeastern University, Boston, MA

2014 - 2019 Adjunct Professor, Department of Psychology, Northeastern University, Boston, MA

2003 - 2014 Professor, Department of Psychology & Center for Complex Systems & Brain Science, Florida Atlantic University, Boca Raton, FL

2009 Invited Scientist, Centre Européen des Sciences du Goût, Dijon, France

1998 - 2003 Research Scientist VI, New York State Institute for Basic Research in Developmental Disabilities (NYS Office of Mental Retardation & Dev. Disabilities), Staten Island, N.Y.
Faculty Member of the Neuroscience Doctoral Program, City University of New York
Honorary Visiting Professor, Department of Biobehavioral Sciences, Teachers College, Columbia University, N.Y.

1992 Invited Directeur d'Études, École Pratique des Hautes Études, Paris, France; Lecturer, Department of Psychology, Université René-Descartes, Paris, France

1987 - 1998	Research Scientist V, New York State Institute for Basic Research in Developmental Disabilities (NYS Office of Mental Retardation & Dev. Disabilities), Staten Island, N.Y.
1985 - 1987	Director of Research, Division of Behavioral and Developmental Pediatrics, Department of Pediatrics, The Evanston Hospital, Evanston, Illinois. Assistant Professor of Pediatrics, Northwestern University Medical School.
1982 - 1985	Research Scientist, Institute for the Study of Developmental Disabilities, University of Illinois at Chicago. Assistant Professor, University of Illinois at Chicago.
1980 - 1982	Assistant Professor, Department of Psychology, Vassar College, Poughkeepsie, NY Visiting Instructor, Albert Einstein College of Medicine, Bronx, NY
1980	Adjunct Assistant Professor, Department of Psychology, New York University, NY
1978 - 1980	Adjunct Assistant Professor, Department of Psychology, Hunter College, CUNY, NY

Honors & Awards

2013	Invited to deliver a talk at TEDxDelrayBeach, Florida
2010	Researcher of the Year, Charles E. Schmidt College of Science, Florida Atlantic University
2009	Researcher of the Year, Charles E. Schmidt College of Science, Florida Atlantic University
2006	Elected President, International Society on Infant Studies
2003	Elected Fellow, Division 7 (Developmental), American Psychological Association
2002	Elected Secretary & Executive Committee Member, International Society on Infant Studies
2000	Elected Fellow, Association for Psychological Science
1980	Rosenbaum Award for Excellence in Research, Albert Einstein College of Medicine
1980	Elected to Sigma Xi
1979 - 1980	National Institutes of Mental Health postdoctoral fellowship in the Research Training Program in Child Mental Health, Albert Einstein College of Medicine
1978	Elected to Psi Chi Honor Society
1975-1979	City University of New York Graduate Fellowship
1972-1973	Sachar Scholarship to Study Abroad, Brandeis University
1970-1974	Brandeis University Scholarship

Research Grants

- Current**
- 11/5/2020. National Institutes of Health, R21, Lewkowicz, D. J., (Principal Investigator); Aslin, R. (co-PI). *"Converging Behavioral and Neural Measures of Attention in Human Infants"*.
- 1/15/2021. National Science Foundation, Principal Investigator, *"Development of Attention in Preschool Children"*.
- 5/1/2018 – 4/30/2022. National Science Foundation, Principal Investigator *"Development of Selective Attention to Multisensory Information in Human Infants"*
- Completed**
- 3/1/11 - 9/30/2018. National Institutes of Health, R01, Principal Investigator *"Intersensory Perceptual Narrowing in Human Infants"*
- 6/1/08 – 5/31/12. National Science Foundation, Principal Investigator *"Development of Sequence Learning in Infancy"*
- 2012 Florida Atlantic University, Technology Fee Transfer Grant, Principal Investigator, *"Eye Tracking Technology Upgrade for FAU Child Development Lab"*
- 2007 The Unicorn Children's Foundation, Boca Raton, FL
"The Development of Learning & Communication Skills in Human Infants"
- 2007 Division of Research & Graduate Studies, Florida Atlantic University, Research Enhancement Award Program
- 4/31/99 - 4/30/07. National Institutes of Health, R01, Principal Investigator *"Intermodal Temporal Information Processing"*
- 4/1/01 - 3/31/04. National Institutes of Health, R01, Shinsuke Shimojo, California Institute of Technology, PI, David J. Lewkowicz, Co-PI
"Development of Auditory-Visual Localization"
- 4/1/96 - 3/31/01. National Institutes Health, R01, Bernard Z. Karmel, Principal Investigator, David J. Lewkowicz, Co-Investigator
"Cocaine Effects on Attention and Arousal in Neonates"
- 8/1/98 - 7/31/2001. National Institutes of Health, R03, Principal Investigator
"The Role of Temporal Contiguity in Perceptual Development"
- 4/1/93 - 3/31/98. National Institutes of Health, R01, Judith M. Gardner, Principal Investigator, David J. Lewkowicz, Co-Investigator
"Arousal and Attention in At-Risk Neonates"
- 9/1/87 - 8/31/90. National Institutes of Health, R01, Principal Investigator
"Development of Intersensory Perception in Human Infants"
- 3/1/86 - 2/29/87. Research Committee of the Evanston Hospital, Northwestern University Medical School, Co-Principal Investigator (with Peter Gorski)
"Antecedents of Physiological Distress in Preterm Infants"
- 3/1/85 - 2/29/87. March of Dimes/The National Foundation, Principal Investigator
"Perception of Temporal Information in Premature Infants"

Professional Societies

Association for Psychological Science (Fellow)
 American Psychological Association (Fellow)
 Society for Research in Child Development
 International Society for Developmental Psychobiology
 International Congress for Infant Studies (President 2008-2010)
 American Association for the Advancement of Science

Professional Service

2017	Scientific Advisory Board, Multisensory Research Forum
2017	Review Panel Member, Society for Research in Child Development biennial conference
2012	Review Panel Member, Autism Centers of Excellence, NIH
2012	Advisory Board Member, Multisensory Research Forum
2012	Scientific Work Group Advisory Member, Sensory Processing Disorders Foundation
2010 - 2012	Past President, International Society on Infant Studies
2008 - 2010	President, International Society on Infant Studies
2007	Committee on Reorganization of the journal Developmental Psychobiology on behalf of the International Society on Developmental Psychobiology
2005 – 2007	Conference Coordinator for the annual conference of the International Society for Developmental Psychobiology
2004 - 2008	Board of Directors, International Society for Developmental Psychobiology
2007	Review Panel Member, Society for Research in Child Development conference
2002 - 2006	Secretary & Member of the Executive Committee, International Society on Infant Studies
1996 - 2010	Executive Committee Member, International Society on Infant Studies
2000 – 2016	Web master, International Society on Infant Studies
2004 – 2019	Listserv administrator, International Society on Infant Studies
2005	Site Visit Member, NSF, Science of Learning Centers
2005	Review Panel Member, NSF, Science of Learning Centers, Catalyst Program
2005	Member, Organizing Committee, International Multisensory Research Forum conference
2004	Review Panel Member, International Society on Infant Studies biennial conference
2003	Review Panel Member, Society for Research in Child Development biennial conference
2002	Editorial Search Committee for the journal <i>Infancy</i>

2000	Member, Organizing Committee of the International Multisensory Research Forum conference
1999	Review Panel Member, Human Cognition & Perception, NSF
1999	Editor, Special Issue of journal Infant Behavior & Development (Vol. 17)
1996	Review Panel Member, International Conference on Infant Studies
1994	Organizing Committee for the International Conference on Infant Studies (Paris)
1988	Chair, Review Panel on Perception and Attention for the International Conference on Infant Studies

University Service

2017 - 2018	Member, Admissions Committee, Department of Communication Sciences Disorders, Northeastern University
2014 - 2018	Member, Tenure and Promotion Committee, Department of Communication Sciences & Disorders, Northeastern University
2014 - 2018	Member, Merit Committee, Department of Communication Sciences & Disorders, Northeastern University
2015 - 2018	Member, Comprehensive Exam Committee, Department of Communication Sciences & Disorders, Northeastern University
2016 - 2017	Chair, Search Committee, Department of Communication Sciences & Disorders, Northeastern University
2015	Member, Curriculum Committee, Department of Communication Sciences & Disorders, Northeastern University
2014 - 2015	Member, Search Committee, Department of Communication Sciences & Disorders, Northeastern University
2014 - 2018	Colloquium Committee, Department of Communication Sciences & Disorders, Northeastern University
2012	Member, Search Committee, Dean of the College of Science, Florida Atlantic University
2012 - 2013	Member, Committee, Neuroscience Seminar Series, Florida Atlantic University
2011 - 2013	Member, Personnel Committee, Department of Psychology, Florida Atlantic University
2008 - 2013	Website Committee, Department of Psychology, Florida Atlantic University
2006 - 2007	Chair, Developmental Area Search Committee, Dept. of Psychology, Florida Atlantic University
2005 - 2006	Member, Developmental Area Search Committee, Dept. of Psychology, Florida Atlantic University
2003 - 2011	Member, Graduate Committee, Dept. of Psychology, Florida Atlantic University
2006	Member, Dean's Search Committee for the Development Officer for the Charles E. Schmidt College of Science, Florida Atlantic University

1992 - 2001	Member, Internal Research & Review Committee, New York State Institute for Basic Research
1990 – 1994	Member, Promotions Committee, New York State Institute for Basic Research
1990 – 1991	Member, Committee on Promotions & Appointments Criteria, New York State Institute for Basic Research
1976 – 1978	Member, Executive Committee, Biopsychology PhD Program, City University of New York

Granting Agencies Reviewer

National Institutes of Child Health & Human Development

National Institutes of Mental Health

National Science Foundation

Natural Sciences & Engineering Research Council of Canada

Agence Nationale de la Recherche, France

Journal Editorial Boards

2014 – present	Developmental Science
2013 – present	Timing and Time Perception
2008 – present	Frontiers in Integrative Neuroscience
2005 – present	Infancy
1996 – present	Developmental Psychobiology
1993 – 1998	Developmental Psychology
2001- 2003	Child Development

Ad Hoc Reviewer

Behavioral Processes

Child Development

Child Development Perspectives

Cognition

Current Biology

Developmental Psychobiology

Developmental Psychology

Developmental Science

Infancy

International Journal of Comparative Psychology
 Infant Behavior and Development
 Journal of Experimental Child Psychology
 Journal of Neuroscience
 Journal of Cognitive Neuroscience
 Language Learning and Development
 Neuroreport
 Perception & Psychophysics
 Perceptual & Motor Skills
 Philosophical Transactions B
 Proceedings of the National Academy of Sciences
 Psychological Bulletin
 Psychological Science
 Quarterly Journal of Experimental Psychology
 Trends in Cognitive Sciences
 Frontiers in Neuroscience
 Perspectives in Child Development

External Examiner for Ph.D. theses:

Virginia Technical University & Institute
 Florida International University
 University of British Columbia, BC, Canada
 University of Massachusetts, Boston

Mentoring

Postdoctoral Fellows

2016 – 2017	Hillary Hadley, Ph.D.
2015 – 2017	Glenda Molina Onario, Ph.D.
2015 – 2016	Maxim Bushmakina, Ph.D.
2014 – 2015	Anne Hillairet de Boisferon, Ph.D.
2012 – 2014	Melissa Brandon, Ph.D.
2002 – 2004	Stuart Marcovitch, Ph.D. - <i>currently Professor, Univ. of North Carolina, Greensboro</i>
2003 – 2004	Janet Boseovski, Ph.D. - <i>currently Associate Professor, Univ. of North Carolina, Greensboro</i>

2001	Bena Schwartz, Ph.D.
2001	Rachel Morgan, Ph.D.
2000	Linnea Dickson, Ph.D.- <i>currently Assoc. Undergraduate Director of Psychology, Rutgers University</i>
1999 – 2000	Kimberly Kraebel, Ph.D. - <i>currently Associate Professor, SUNY Cortland</i>

Graduate Students

2020 – present	Tristan Yates (Ph.D., Yale University)
2013 – 2015	Jaclyn Forlano (Masters, Northeastern, committee member)
2010 – 2015	Amy Tift (Ph.D., FAU, primary advisor)
2010 – 2015	Nicholas Minar (Ph.D., FAU, primary advisor)
2005 – 2008	Ryan Sowinski (Masters, FAU, primary advisor)
2005 – 2008	Silvia Place (Masters, FAU, primary advisor)
2002	Lars Ross (Ph.D., CUNY, primary advisor)
1993 – 1995	Adam Anderson (Ph.D., CUNY; primary advisor; transferred to Yale)

Student Research Assistants (FAU, NEU, Haskins)

Lamiya Khan	Laura Londono	Tara Kane
Genesis Guzman	Melinda Pompeo	Sabie Marcellus
Micallia Wilson	Adam Chen	Eliza Zijin
Rachel Holzberg	Jennifer Bogart	Tobias Kremsmyer
Samantha Shumaker	Matthew Stichman	Caralyn Zeltner
Hollie Hirsch	Ramon Lefebre	Victoria Miller-Browne
Ashley Ajon	Daniella Marie Coello	Allie Overoye
Autumn Jordan	Megan Romanczyk	Jeffrey Sun
Rebecca Adler	Anni Rong	Anna Paterson
Juliana Orrego	Carmen Shaw	Leah Mason
Lauren Dunnder (Honors)	Aishwarya Tripathi	Aika Misawa
Ariel Barber	Sonali Singal	Renee Dembo
Jessica Lefebvre	Callie Marsalisi	Caleb Cohen
Emily Rubin	Megan Romanczyk	Stephanie Owusu
Samantha Lewis-Solar	Sophie Kronen	

Staff (Grant Supported & Supervised)

2021 - Present	Laurel Whitfield (Haskins, lab manager, supported by NSF grant funds)
2019 – 2021	Nicole Cuneo (Haskins, lab manager, supported by NSF grant funds)
2018 – 2019	Vishakha Agrawal (NEU, lab manager, supported by NSF grant funds)

2017 - 2018	Maire Diemer (NEU, lab manager, supported by NEU & NIH grant funds)
2016 -2017	Kristina McCarthy (NEU, lab manager, supported by NIH funds)
2015	Elizabeth Chen (NEU, lab manager, supported by NIH funds)
2008 – 2014	Kelly Henning (FAU, lab manager, supported by NIH & NSF grant funds)
2006 – 2008	Erinn F. Beck (FAU lab manager, supported by NIH grant funds)
2004 – 2005	Jennifer Hughes (FAU; lab manager, supported by NIH grant funds)
1987 - 2003	Marcia Dabbene (NYS Institute for Basic Research, lab manager, supported by NIH & New York State grant funds)

Papers in Refereed Journals

Gardner, J., **Lewkowicz**, D. J., & Turkewitz, G. (1977). Development of postural asymmetry in premature infants. *Developmental Psychobiology*, 10, 471-480.

Lewkowicz, D. J., Gardner, J., & Turkewitz, G. (1979). Lateral differences and head turning responses to somesthetic stimulation in premature human infants. *Developmental Psychobiology*, 12, 607-614.

Lewkowicz, D. J. (1980). A method for adapting headphones for use with infants. *Infant Behavior and Development*, 3, 283-284.

Lewkowicz, D. J. & Turkewitz, G. (1980). Cross-modal equivalence in early infancy: auditory-visual intensity matching. *Developmental Psychology*, 16, 597-607.

Lewkowicz, D. J. & Turkewitz, G. (1981). Intersensory interaction in newborns: Modification of visual preferences following exposure to sound. *Child Development*, 52, 827-832.

Lewkowicz, D. J. & Turkewitz, G. (1982). Influence of hemispheric specialization in sensory processing on reaching in infants: Age and gender related effects. *Developmental Psychology*, 18, 301-308.

Lewkowicz, D. J. (1985). Bisensory response to temporal frequency in 4-month-old infants. *Developmental Psychology*, 21, 306-317.

Lewkowicz, D. J. (1985). Developmental changes in infants' response to temporal frequency. *Developmental Psychology*, 21, 858-865.

Gardner, J. M., **Lewkowicz**, D. J., Rose, S. A., & Karmel, B. Z. (1986). Effects of visual and auditory stimulation on subsequent visual preferences in neonates. *International Journal of Behavioural Development*, 9, 251-263.

Lewkowicz, D. J. (1986). Developmental changes in infants' bisensory response to synchronous durations. *Infant Behavior and Development*, 9, 335-353.

Gorski, P. A., **Lewkowicz**, D. J., & Huntington, L. (1987). Advances in neonatal and infant behavioral assessment: toward a comprehensive evaluation of early patterns of development. *Journal of Developmental and Behavioral Pediatrics*, 8, 39-50.

Lewkowicz, D. J. (1988). Sensory dominance in infants I: Six-month-old infants' response to auditory-visual compounds. *Developmental Psychology*, 24, 155-171.

Lewkowicz, D. J. (1988). Sensory dominance in infants II: Ten-month-old infants' response to auditory-visual compounds. *Developmental Psychology*, 24, 172-182.

Gorski, P.A., Huntington L., & **Lewkowicz**, D.J., (1990). Handling preterm infants in hospitals. Stimulating controversy about timing of stimulation. *Clinical Perinatology*, 17(1), 103-112.

Lewkowicz, D. J. (1992). Infants' response to temporally-based intersensory equivalence: The effect of synchronous sounds on visual preferences for moving stimuli. *Infant Behavior and Development*, 15, 297-324.

Lewkowicz, D. J. (1992). Infant responsiveness to the auditory and visual attributes of a sounding/moving stimulus. *Perception & Psychophysics*, 52, 519-528.

Lewkowicz, D. J. (1993). Le rôle des indices spécifiques de modalité dans la perception des équivalences intermodales chez les bébés. *Psychologie Française*, 38(1), 33-40.

Lewkowicz, D. J. (1994). Limitations on infants' response to rate-based auditory-visual relations. *Developmental Psychology*, 30, 880-892 .

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Invited Lectures & Seminars

- Lateralization of function in the premature human infant. Department of Psychology, Hunter College, NY 1978.
- Perception of intersensory equivalence in human infants. Department of Psychology, University of Maryland, Baltimore, 1979.
- Intersensory development in infants. Department of Animal Behavior, American Museum of Natural History, NY 1979.
- Development of lateral differences in infants. Department of Psychiatry, Albert Einstein College of Medicine, NY 1979.
- Development of intersensory functioning in infants. Department of Psychiatry, Albert Einstein College of Medicine, NY 1979.
- Cross-modal equivalence and the development of intersensory integration. Department of Education, Harvard University, Cambridge, MA 1980.
- Development of intersensory functions. Invited talk at the Fourth International Conference in Neuroscience and Education. Teachers College/Columbia University, N.Y. 1982.

- The development of intersensory integration in infants. Robert Wood Johnson School of Medicine, Rutgers University, 1989.
- The development of intersensory perception in human infants. Department of Psychology, Stanford University, 1989.
- Development of temporal processing mechanisms in infants. Invited paper delivered at the NATO Advanced Research Workshop entitled "Time, Action, and Cognition" in Saint-Malo, France, 1991.
- Development of intersensory perception in human infants. Laboratoire de Psycho-biologie de l'Enfant, Centre National de la Recherche Scientifique, Paris, France, 1991.
- Hearing and seeing in infants: how do they interact? Pitzer College, Claremont, California, 1991.
- Intersensory interactions during early human development. University of British Columbia, Vancouver, Canada, 1991.
- The role of modality-specific cues in infants' intersensory perception of equivalence. Laboratoire de Psycho-biologie du Développement, Centre National de la Recherche Scientifique, Paris, France, 1992.
- The role of temporal factors in infants' perception of intersensory relations. Laboratoire de Neurosciences Cognitives, Centre National de la Recherche Scientifique, Marseilles, France, 1992.
- Sensory dominance in infants: Myth or reality. Laboratoire de Psychologie du Développement et de l'Éducation de l'Enfant, Université René Descartes, Paris, France, 1992.
- The development of intermodal knowledge in infants. Department of Psychology, University of Sussex, Brighton, England, 1993.
- A voice is a voice except when you put a face on it: Infants' perception of face/voice compounds. Department of Psychology, Queen's University, Kingston, Ontario, Canada, October, 1993.
- The development of temporally based intersensory perception in human infants. Invited lecture delivered in the Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, April, 1994.
- Development of intersensory perception and the role of sensory dominance. Invited lecture delivered at the Centre for Human Development, Concordia University, Montréal, Canada, February, 1995.
- The development of temporal intermodal cognition. McGill University, Montreal, Canada, February, 1995.
- The development of temporal intermodal perception in human infants. Invited lecture delivered at Rutgers University, New Brunswick, NJ, April, 1995.
- Comparative aspects of intersensory development. Binghamton University, Binghamton, NY, September, 1995.

- Development of face/voice perception in human infants: The role of prosody and other temporal dimensions. Invited lecture delivered at the Graduate Center of the City University of New York, New York, October, 1995.
- The development of intersensory integration: History, systems, and research findings. Invited lecture delivered in the Department of Psychology, Indiana University, Bloomington, Indiana, February, 1997.
- The development of temporal intersensory perception in human infants. Invited lecture delivered in the Department of Psychology, Hunter College, New York, March, 1997.
- Time and the development of intermodal integration. Invited lecture delivered in the Department of Biology, Neural Computation Program, California Institute of Technology, Pasadena, California, April, 1998.
- Perception of talking faces in early development. Invited lecture delivered in the Department of Biology, Neural Computation Program, California Institute of Technology, Pasadena, California, March, 1999.
- Infants' perception of the audible, visible, and bimodal attributes of talking and singing faces. Invited plenary lecture delivered at the "Auditory-Visual Speech Processing International Conference", University of California, Santa Cruz, August, 1999.
- Intersensory integration in human infants. Invited lecture delivered in the Department of Psychology, Queens College of the City University of New York. December 1, 1999.
- Development of Intersensory Perception in Human Infants. Invited lecture delivered in the Department of Neurobiology and Anatomy, Wake Forest University School of Medicine, March 16, 2000.
- Development of Perception and Cognition in Human Infants. Invited Grand Rounds Lecture, Department of Pediatrics, Staten Island University Hospital, Staten Island, N.Y., October, 2000.
- Heterogeneity and heterochrony in the development of intersensory perception in human infants. Invited lecture, Department of Psychology, New York University, February 22, 2001.
- Intersensory perception in human infants: a window into the process of development. Invited lecture, Sackler Institute, Department of Psychiatry, Cornell University Medical Center, NY, May 29, 2001.
- Snippets of time: Do human infants perceive their temporally organized multimodal world in chunks? Invited lecture, Department of Biology, California Institute of Technology, Pasadena, CA, July 6, 2001.
- Heterochrony and heterogeneity in the development of intersensory perception in human infants. Invited lecture, J. B. Pierce Laboratory, Yale University, October, 2001.
- Development of intersensory perception in human infants: Empirical findings and underlying principles, Invited lecture, Indiana University School of Medicine, March, 2002.

- Perception of Multimodal Sequential Structure in Human Infants. Invited lecture in the Cornell Cognitive Studies Symposium: "Statistical Learning Across Cognition", Department of Psychology, Cornell University, April, 2002.
- Development of Temporal Processing Skills in Human Infants. Invited lecture, U. Mass. Medical School/Eunice Kennedy Shriver Center, Waltham, MA, August, 2002.
- Development of Temporal Serial Order Perception in Human Infants. Invited lecture, Department of Psychology, Columbia University, October, 2002.
- The Development of Temporal Perception in Human Infants. Invited lecture, Center for Complex Systems, Florida Atlantic University, September, 2003.
- How Do Babies Learn About the World Around Them? Invited Lecture in the Frontiers of Science Lecture Series in the Charles E. Schmidt College of Science, Florida Atlantic University. October, 2003.
- The Development of Multisensory Temporal Perception in Human Infants. Invited lecture, Department of Psychology, University of South Florida, St. Petersburg, FL, Nov., 2003.
- The Development of Intersensory Integration in Human Infants. Invited lecture, Department of Psychology, University of South Florida, Tampa, FL, Nov., 2003.
- The Development of Sequence Learning in Human Infants. Invited colloquium, Department of Psychology, New York University, New York, March, 2006.
- The Development of Intersensory Perception in Human Infants. Invited colloquium, Department of Neurobiology & Anatomy, Wake Forest University Medical School, Winston Salem, NC, March, 2006.
- Of Monkeys & Men: What Can the Former Tell Us About the Development of Perception in the Latter?" Invited colloquium, Department of Neuroscience, Brigham Young University, Provo, Utah, November, 2006.
- Developmental Narrowing of Face-Voice & Other Forms of Intersensory Perception in Infancy. Department of Psychology Colloquium, Florida Atlantic University, April, 2007.
- Of Monkeys & Men: What Can the Former Tell Us About Perceptual Development and Experience in the Latter? Invited lecture in the Vanderbilt Kennedy Center Lectures on Human Development and Developmental Disabilities, Vanderbilt University. October, 2007.
- Experiential Canalization and its Role in Human Perceptual Development, Invited colloquium, Department of Psychology, University of Connecticut, December 12, 2007.
- How Experience Contributes to the Acquisition of Knowledge in Infancy, Lecture delivered to the Lifelong Learning Society, FAU, January, 2009.
- The Development of Intersensory Integration in Infancy, Invited Keynote Address, Pediatric Therapy Network Conference, Long Beach, CA, February, 2009.

- The (Surprising?) Effects of Experience on the Development of Multisensory Perception in Humans and Other Primates, Invited Colloquium, Department of Psychology, Cornell University, February, 2009.
- The (Surprising?) Effects of Experience on the Development of Multisensory Perception in Humans and Other Primates, Invited Colloquium, Neuroscience Institute, Princeton University, March, 2009.
- From Here to There: Developing Systems, Developing Children, and the Science of Change. Invited Inaugural Address for the Delta Center, Department of Psychology, University of Iowa, Iowa City, March, 2009.
- Multisensory Perceptual Narrowing in Primate Development. Invited Colloquium, Department of Psychology, Université Pierre Mendès, Grenoble, France, October 6, 2009.
- The Development of Sequence Learning in Infancy. Invited Colloquium, Department of Psychology, Goldsmiths College, University of London, England, October 15, 2009.
- Multisensory Perceptual Narrowing in Primate Development. Invited Colloquium, Center for Brain & Cognitive Development, Birkbeck College, University of London, England, October 19, 2009.
- Multisensory Perceptual Narrowing in Primate Development. Invited Colloquium, Department of Psychology, University of Oxford, England, October 20, 2009.
- Multisensory Perceptual Narrowing in Early Primate Development. Invited Colloquium, Department of Psychology, University of Barcelona and Department of Communication & Technology, Universitat Pompeu Fabra, Barcelona, Spain, October 29, 2009.
- Multisensory Perceptual Narrowing in Primate Development. Invited Colloquium, Department of Psychology, University of Padova, Italy, November, 2009.
- Multisensory Perceptual Narrowing in Primate Development. Invited Colloquium, Department of Radiology, University of Lausanne Medical Center, Lausanne, Switzerland, November 19, 2009.
- Tuning the Infant's Perceptual System: How Infants Become Experts. Invited Colloquium, Centre Européen des Sciences du Goût, Dijon, France, November 24, 2009.
- The Development of Sequence Learning in Infancy. Invited Colloquium, Centre Européen des Sciences du Goût, Dijon, France, November 27, 2009.
- Tuning the Infant's Perceptual System: How Infants Become Experts. Invited Colloquium, Laboratoire Psychologie des Actions Langagières et Motrices (PALM) de l'université de Caen Basse-Normandie, France, December 10, 2009.
- Multisensory Perceptual Narrowing in Early Development. Invited Colloquium, Laboratoire Psychologie de la Perception, Université Paris Descartes, Paris, France, December 14, 2009.
- Does Nature or Experience Make Babies Smart? Invited Colloquium, Department of Psychology, Gettysburg College, October 18, 2010.

- Experience & the Development of Perceptual Expertise in Infancy. Invited Colloquium, Department of Psychology, University of Massachusetts Boston, December, 2010.
- Development of Intersensory Perception in Infants and Children. Keynote Speaker, Sensory Processing Disorder Foundation 13th International Institute and Symposium, Ft. Lauderdale, FL, October, 2011.
- The Development of Multisensory Speech Perception (& Production) in Infancy. Talk presented at a symposium in honor of Dr. Michael Posner, Center for Complex Systems & Brain Science, Florida Atlantic University, December 8, 2011.
- Experience & the Development of Multisensory Perception & Expertise. Invited Colloquium, Department of Psychology, Brandeis University, March, 2012.
- How Everyday Experience Contributes to the Development of Fundamental Perceptual and Cognitive Skills in Infancy. Invited Colloquium, TCD Neuroscience Society and 'Trinity Psychology 50 Master Classes'. Trinity College Dublin, Ireland, June 25, 2012.
- "It's Neither Nature nor Nurture: Acquisition of Perceptual & Cognitive Skills in Infancy". Invited Colloquium, FAU Neuroscience Seminar Series, Oct. 2, 2012.
- "The Critical Role of Experience in the Acquisition of Knowledge in Human Infants", Invited Colloquium, Kennedy Center, Albert Einstein College of Medicine, Bronx, N.Y., Dec. 4, 2012.
- "Experience & the Development of Face/Voice Expertise in Infancy", Invited Colloquium, Department of Psychology, Concordia University, Montréal, Canada, March 7, 2013.
- "Experience Guides the Development of Multisensory & Unisensory Perception in Infancy" Invited Lecture, Early Identification of Sensory Processing Disorder and Related Diagnoses Symposium, The Spiral Foundation, Newton, MA, March 23, 2013.
- "How Experience Contributes to the Development of Face/Voice Expertise in Human Infants", Invited Colloquium, Department of Psychology, University of Miami, March 29, 2013.
- "Babies are Smarter than You Think: Perceptual Expertise Begins in Infancy", Invited Public Lecture, Vision Sciences Society Annual Conference, Naples, FL, May, 2013.
- "Experience Guides the Development of Perceptual Expertise in Human Infants", Bar Ilan University, Tel Aviv, Israel, May, 2013.
- "Experience Guides the Development of Perceptual Expertise in Human Infants", Technion, Israel Institute of Technology, Israel, May, 2013.
- "The Development of Multisensory Communication", Invited Colloquium, Department of Speech & Language Pathology & Audiology, Northeastern University, Boston, MA, September 26, 2013.
- "Experience & the Development of Perceptual Expertise in Human Infants", Invited talk, Dept. of Psychology, University of Western Ontario, Canada, December 6, 2013.

- “Why We Must Understand the Development of Multisensory Perception in Infancy to Understand the Development of Communication”, Invited Colloquium, Department of Psychology, Florida International University, March 4, 2014.
- “The Development of Multisensory Perception in Human Infants”, Invited colloquium, Department of Psychology, University of Massachusetts Boston, March 7, 2014. Boston, MA.
- “The Development of Multisensory Perception & Communication in Infancy & Beyond”, Invited Colloquium, Department of Psychology, Boston University, Boston, MA, Oct. 29, 2014.
- “The Development of Multisensory Communication Skills in Infancy”, Invited Colloquium, Department of Psychology, University of Massachusetts, Amherst, March 5, 2015.
- “Development of Multisensory Perception in Infancy & Beyond”, Invited colloquium, Ecole d'optométrie, University of Montréal, March 9, 2015.
- “The Development of Multisensory Processing & Communication in Infancy”, Invited Colloquium, Department of Psychology, Boston College, Boston, MA, September 21, 2015.
- “Development of Multisensory Perception in Infancy & Beyond”, Invited Colloquium, Centre NeuroQAM, Université du Québec à Montréal, September 25, 2015.
- “Development of Multisensory Perception & Communication”, Invited Colloquium, Department of Psychological and Cognitive Sciences, Brown University, January 29, 2016.
- “The Development of Multisensory Perception in Infancy & the Role of Experience”, Invited Colloquium, Faculty of Psychology & Human Movement Science, University of Hamburg, Hamburg, Germany, May 4, 2016.
- “The Development of Multisensory Processing and Attention in Infancy & their Consequences for Audiovisual Speech Processing”, Invited Colloquium, Project on Child Development, Department of Psychology, Northwestern University, May 10, 2018.
- “The Role of Multisensory Processing and Selective Attention in Speech & Language Processing in Infancy”, Invited Colloquium, Prakash Project Group, Department of Brain & Cognitive Sciences, Massachusetts Institute of Technology, May 16, 2018.
- “The Role of Multisensory Perception and Selective Attention in Speech & Language Processing in Infancy”. Invited Colloquium, Laboratoire Psychologie de la Perception, University Paris Descartes, Paris, France, May 29, 2018.
- “The Development of Multisensory Processing and Attention and their Role in Audiovisual Processing”. Invited Colloquium, Haskins Laboratories, New Haven, CT, Sept. 20, 2018.
- “The Development of Multisensory Processing and Attention and their Role in Audiovisual Processing”. Invited Colloquium, Graduate Center, City University of New York, New York, October 2, 2018.

- “Can Selective Attention to Audiovisual Cues & their Sequential Structure Provide Insights into the Development of Speech & Language?” Invited talk, Haskins Laboratories, New Haven, CT, March 7th, 2019.
- “Intersensory Perception”, Invited talk, Department of Developmental Psychology, University of Padova, Italy, October 21, 2019.
- “The Role of Multisensory Perception and Selective Attention in Speech & Language Acquisition in Infancy”, Invited talk, Department of Developmental Psychology, University of Padova, Italy, October 31, 2019.
- “Sequence Learning in Infancy”, Invited talk, Department of Developmental Psychology, University of Padova, Italy, November 4, 2019.
- “Multisensory Perception and Selective Attention in Infancy and Beyond: Their Role in Speech & Language Processing and Acquisition”, Invited talk, Department of Psychology, University of Milan Bicocca, Italy, November 5, 2019.
- “Development of Intersensory Perception”, Invited talk, Center for Mind/Brain, University of Trento, Rovereto, Italy, November 11, 2019.
- “The Development of Selective Attention, Multisensory Integration, & Sequence Learning in Infancy & their Consequences for the Development of Speech and Language”, Invited talk, Current Works in Cognitive Development, Department of Psychology, Yale University, December 4, 2019.

Conference Presentations

- Lewkowicz, D. J. & Gardner, J. Lateral differentiation in premature infants. Hunter College, Psychology Convention, Hunter College, NY 1976.
- Lewkowicz, D. J. Sexual exhaustion and recovery in Octopus Vulgaris. Animal Behavior Society, New York, 1976.
- Lewkowicz, D. J. Sexual exhaustion and recovery in Octopus Vulgaris. Hunter College Psychology Convention, Hunter College, NY 1977.
- Lewkowicz, D. J., Gardner, J. & Turkewitz, G. Lateral differences in the premature infant's response to perioral stimulation. Eastern Psychological Association, Washington, D.C., 1978.
- Lewkowicz, D. J. & Turkewitz, G. Intersensory equivalence in three-week-old infants. Eastern Psychological Association, Hartford, CT 1980.
- Lewkowicz, D. J. & Turkewitz, G. Intersensory equivalence in young infants. International Conference on Infant Studies, New Haven, CT 1980.
- Lewkowicz, D. J. & Turkewitz, G. Hemispheric specialization in processing auditory information during infancy. Society for Research in Child Development, Boston, MA 1981.

- Gardner, J. M., Lewkowicz, D. J., Rose, S. A. Intra- and inter-sensory effects of prestimulation on visual preferences for different temporal frequencies in newborn infants. Society for Research in Child Development, Detroit, MI 1983.
- Lewkowicz, D. J. Bimodal response to temporal frequency in 4-month-old infants. International Conference on Infant Studies, NY 1984.
- Lewkowicz, D. J. Developmental changes in infants' bisensory response to synchronous durations. Society for Research in Child Development, Toronto, Canada, 1985.
- Lewkowicz, D. J. Transitions in temporal information processing in infants. Paper presented at the meetings of the International Society for the Study of Behavioural Development, Tours, France, 1985.
- Lewkowicz, D. J. Co-organized symposium on "Mechanisms underlying intersensory perception". Delivered a paper entitled "Developmental changes in intersensory organization". International Conference on Infant Studies, Los Angeles, 1986.
- Lewkowicz, D. J. Developmental changes in infants' response to multisensory compounds. Society for Research in Child Development, Baltimore, MD, 1987.
- Lewkowicz, D. J. Organized symposium on "Sensory dominance in early development". Delivered a paper entitled "Developmental changes in sensory dominance in infancy. International Conference on Infant Studies, Washington, D.C., 1988.
- Lewkowicz, D.J. Sensory dominance in human infants' response to multisensory information. International Society for Developmental Psychobiology, Toronto, 1988.
- Lewkowicz, D.J. Infants' auditory/visual matching of rate with spatially-static visual stimuli. Society for Research in Child Development, Kansas City, MO, 1989.
- Lewkowicz, D.J. Infants' response to auditory/visual concordance with visually-dynamic stimuli. Society for Research in Child Development, Kansas City, MO, 1989.
- Lewkowicz, D.J. Sensory dominance: Absence of auditory dominance when the visual component of a compound stimulus is kinetic. International Society for the Study of Behavioral Development. Jyväskylä, Finland, 1989.
- Lewkowicz, D.J. Developmental changes in human infants' response to kinetic auditory/visual compounds. Paper presented at the meetings of the International Society for Developmental Psychobiology, San Francisco, 1989.
- Lewkowicz, D.J. Developmental differences in the effect of intersensory learning on auditory/visual matching. Paper delivered at the International Conference on Infant Studies, Montréal, Canada, 1990.
- Lewkowicz, D.J. Organized symposium entitled "Comparative aspects of intersensory interactions in early development". Delivered paper entitled "Developmental differences in infants' response to auditory/visual compounds". International Conference on Infant Studies, Montréal, Canada, 1990.

- Lewkowicz, D. J. Using combinations of sensory modalities to study infant capabilities. Paper delivered at the Satellite symposium of the Fifth International Congress of Psychophysiology, Budapest, Hungary, 1990.
- Lewkowicz, D. J. The effect of short-term learning on auditory/visual matching in infants. Poster presented at the International Society for Developmental Psychobiology meeting, Cambridge, England, 1990.
- Lewkowicz, D. J. Infants' responsiveness to the audible and visible components of speech. Poster presented at the International Conference on Infant Studies, Miami, FL, 1992.
- Lewkowicz, D. J. The development of temporally based intersensory perception in human infants. Symposium paper delivered at the Society for Research in Child Development Meetings, New Orleans, 1993.
- Lewkowicz, D. J. & Edmonson, D. Infants' responsiveness to the multimodal properties of the human face. Poster presented at the Society for Research in Child Development Meetings, New Orleans, 1993.
- Lewkowicz, D.J. Perception of auditory-visual synchrony in human infants. Poster presented at the European Winter Conference on Brain Research, La Plagne, France, March, 1994.
- Lewkowicz, D.J. Developmental implications of qualitatively different mechanisms of intersensory integration. Symposium paper. International Conference on Infant Studies, Paris, France, 1994.
- Lewkowicz, D.J. Developmental aspects of the perception of temporally based intersensory equivalence. Symposium paper delivered at the International Conference on Infant Studies, Paris, France, June, 1994
- Lewkowicz, D. J., Gardner, J., & Karmel, B. Z. The effects of brain damage on the perception of auditory-visual asynchrony in human infants. European Winter Conference on Brain Research, L'Alpe d'Huez, France, March, 1995.
- Lewkowicz, D. J., Karmel, B. Z. & Gardner, J. Is responsiveness to multimodal, infant-directed talk affected by CNS damage and exposure to cocaine? International Conference on Infant Studies, Providence, R.I., April, 1996
- Lewkowicz, D. J. The temporal basis of multimodal integration. Symposium paper delivered at the International Conference on Infant Studies, Providence, R.I., April, 1996
- Lewkowicz, D. J., Gardner, J. Karmel, B. Z. The effects of brain injury and cocaine exposure on infants' response to auditory-visual asynchrony. 26th International Congress of Psychology, Montréal, Canada, August, 1996.
- Lewkowicz, D. J. The development of temporal intersensory perception in human infants. International Society for the Study of Behavioral Development Conference, Québec City, Canada, August, 1996.
- Lewkowicz, D.J. Human infants' response to the audible and visible features of the face. Paper delivered at the International Society for Developmental Psychobiology, Washington, D.C., Nov., 1996.

- Columbus, F., Sleight, M., Lickliter, R. & Lewkowicz, D. The role of temporal contiguity in bobwhite quail chicks' responsiveness to spatial features of multimodal maternal cues. Poster presented at the Annual meeting of the Eastern Psychological Association, Washington, D.C., April, 1997.
- Lewkowicz, D. J., Karmel, B. Z., & Gardner, J. M. Effects of prenatal cocaine exposure on responsiveness to multimodal information in infants between 4 and 10 months of age. Poster presentation, NY Academy of Sciences Conference: Cocaine - Effects on the Developing Brain, Washington, DC, 1997.
- Freedland, R., Karmel, B. Z., Gardner, J.M., & Lewkowicz, D.J. Prenatal cocaine exposure and stimulus-seeking behaviors between 4- and 10-months: A continuation of poor arousal regulation as neonates. NY Academy of Sciences Conference: Cocaine - Effects on the Developing Brain, Washington, DC, 1997.
- Lewkowicz, D. J. & Lickliter, R. The detection of intermodal rate and synchrony relations in 6- and 8-month-old infants. International Conference on Infant Studies, Atlanta, GA, April, 1998.
- Lewkowicz, D. J., Gardner, J. M. & Karmel, B. Z. Responsiveness to the audible and visible components of the human face in high-risk & cocaine exposed infants. International Conference on Infant Studies, Atlanta, GA, April, 1998
- Lewkowicz, D. J. The Development of Temporal and Spatial Intermodal Perception. Cognitive Contributions to the Perception of Spatial and Temporal Events, Invited talk at a conference at the Max Planck Institute, Munich, Germany, September, 1998.
- Lewkowicz, D. J. The Perception of Intersensory Relations in Human Infancy: How Infants Integrate Human Faces and Voices. Invited talk given at the Lindamood-Bell 1999 National Research and Workshop Conference, San Francisco, CA, March, 1999.
- Lewkowicz, D. J. Infants' perception of the audible, visible, and bimodal attributes of talking and singing faces. Invited plenary lecture delivered at the Auditory-Visual Speech Processing International Conference. University of California, Santa Cruz, August, 1999.
- Lewkowicz, D. J. The Development of Temporally Based Intersensory Integration in Human Infants. Invited lecture delivered at the Experimental Psychology Society Workshop on Crossmodal Attention and Multisensory Integration, Oxford University, England, September, 1999.
- Scheier, C., Lewkowicz, D., & Shimojo, S. Perceptual Reorganization of an Ambiguous Motion Display by Auditory Stimulation in Human Infants: Tracking Eye and Head Movements. Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL, May, 2000.
- Lewkowicz, D. J. & Dickson, L. R. Infants' Perception of Auditory-Visual Duration. International Conference on Infant Studies, Brighton, England, July, 2000.
- Scheier, C., Lewkowicz, D. J. & Shimojo, S. Perceptual Reorganization of an Ambiguous Motion Display by Auditory Stimulation. International Conference on Infant Studies, Brighton, England, July, 2000.
- Lewkowicz, D. J. The missing (or, at least, neglected) link in developmental studies: The relationship between the perception of amodal invariants and of modality specific-relations. Invited lecture delivered at the 2nd Annual Multisensory Research Conference, Tarrytown, New York, October, 2000.

- Lewkowicz, D. J., Kraebel, K., Dickson, L. Intersensory Perception of Syllabic Duration in Human Infants, Poster presented at the Society for Research in Child Development meeting, Minneapolis, MN, April, 2001.
- Lewkowicz, D. J., Dickson, L., & Kraebel, K. Perception of Multimodal Rhythm in Human Infants, Poster presented at the Society for Research in Child Development meeting, Minneapolis, MN, April, 2001.
- Lewkowicz, D. J. Heterochrony and Heterogeneity in the Development of Intersensory Perception. Paper presented in a symposium organized by D. Lewkowicz entitled Perceptual Development, at the European Conference on Developmental Psychology, Uppsala, Sweden, August, 2001.
- Lewkowicz, D. J. The Problem of Serial Order in Human Infants: Perception of Temporally Ordered Multimodal Events. Paper presented at the International Society for Developmental Psychobiology Annual Meeting, San Diego, CA, November 2001.
- Lewkowicz, D. J. & Schwartz, B. Infants' Perception of Bimodal Temporal Order. Presented at the International Conference on Infant Studies, Toronto, Canada, April, 2002.
- Lewkowicz, D. J. & Schwartz, B. Intersensory Perception in Infancy: Response to Competing Amodal and Modality-Specific Attributes. Presented at the International Conference on Infant Studies, Toronto, Canada, April, 2002.
- Lewkowicz, D. J. Perception of multimodal sequential structure in human infants. Invited lecture in symposium entitled: "Statistical Learning Across Cognition", Cornell University, April, 2002. Lewkowicz, D. J. Perception of multimodal temporal structure in human infants. Invited lecture at the "Multisensory Control of Movement" conference, Naples, Florida, April, 2002.
- Lewkowicz, D. J. Human Infants' Perception of Audiovisual Temporal Structure. Talk delivered at the 3rd conference of the International Multisensory Research Forum, Geneva, Switzerland, May, 2002.
- Lewkowicz, D. J. Perception and integration of audiovisual speech in human infants. Invited talk delivered at the International Conference on Spoken Language Processing, Denver, Colorado, September, 2002.
- Lewkowicz, D. J. Infants' perception of audiovisual rhythm and tempo. Presented at the Society for Research in Child Development meeting, Tampa, Florida, April, 2003.
- Lewkowicz, D. J. & Marcovitch, S. Perception of audiovisual sequences in human infants. Presented at the International Society for Developmental Psychobiology, New Orleans, LA, Nov., 2003.
- Ross, L., Lewkowicz, D., Molholm, S., Foxe, J.J.. How the quality of sounds can affect the perception of a bistable motion event. Annual meeting of the International Multisensory Research Society, Hamilton, Ontario, Canada, June, 2003.
- Ross, L., Molholm, S., Lewkowicz, D., Javitt, D. C., Foxe, J.J. "Swoosh": How the Quality of Sounds Affect the Perception of a Visual Motion Illusion. Poster presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco, USA, April, 2004.
- Lewkowicz, D. J. & Marcovitch, S. Infants' perception of 4-element audiovisual sequences. Presented at the International Conference on Infant Studies, Chicago, May, 2004.

- Marcovitch, S. & Lewkowicz, D. J. Statistical learning in infancy: Frequency and transitional probability play independent roles. Presented at the International Conference on Infant Studies, Chicago, May, 2004.
- Lewkowicz, D. J. Perception of serial order from infancy to early childhood. Paper presented in a symposium organized by D. Lewkowicz entitled: "Perception, Learning and Recall of the Serial Organization of Events" at the International Conference on Infant Studies, Chicago, May, 2004.
- Lewkowicz, D. J. "The Development of Sequential Processing & the Critical Role of Multisensory Information", Talk delivered at the International Multisensory Research Forum meeting, Barcelona, Spain, June, 2004.
- Lewkowicz, D. J. "The Role of Multimodal Redundancy in Infant Perception of Temporal and Serial Event Structure", Symposium paper delivered at the Society for Research in Child Development meeting, Atlanta, GA, April, 2005.
- Lewkowicz, D. J. Symposium entitled: "Multimodal Influences on Infants' and Children's' Detection, Discrimination, and Learning About Visual and Auditory Events", Invited Discussant, Society for Research in Child Development meeting, Atlanta, GA, April, 2005.
- Marcovitch, S., Lewkowicz, D. J., & Boseovski, J. "The Effect of Order-Relevant Labels in a Simple Spatial Memory Task", Poster presented at the Society for Research in Child Development meeting, Atlanta, GA, April, 2005.
- Lewkowicz, D. J. "Infants Can Perceive Intersensory Rhythm Equivalence", Poster presented at the International Multisensory Research Forum, Rovereto, Italy, June, 2005.
- Lewkowicz, D. J. Learning and Cross-Modal Generalization of Temporal Structure in Human Infants. Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Washington, D.C., November, 2005.
- Lewkowicz, D. J. "Perception of Spatiotemporally Organized Multimodal Sequences in Human Infants", symposium paper presented at the International Conference on Infant Studies, Kyoto, Japan, June, 2006.
- Lewkowicz D. J. & Ghazanfar, A. A. "Perceptual Narrowing in Infancy: The Loss of Intersensory Function in Human Infants", symposium paper presented at the International Conference on Infant Studies, Kyoto, Japan, June, 2006.
- Lewkowicz, D. J. "Narrowing of Intersensory Perception in Human Infants", Talk delivered at the International Society for Developmental Psychobiology annual meeting, Atlanta, Oct. 2006.
- Lewkowicz, D. J. "Experience and Perceptual Development: Canalization of Audio-Visual Integration in Infancy", Symposium paper presented at the Society for Research in Child Development biennial meeting, Boston, March, 2007.
- Lewkowicz, D. J. "Developmental Narrowing of Face-Voice Integration in Human Infants", Invited talk at a preconference workshop on face processing at the Society for Research in Child Development biennial meeting, Boston, March, 2007.

- Lewkowicz, D. J. "Are Infants Selectively Tuned to Intersensory Unity?", Poster presented at the annual meeting of the International Society for Developmental Psychobiology, San Diego, C. A., November, 2007.
- Zangenehpour, S, Lewkowicz, D. J, Ghazanfar, A. A., and Zatorre, R.J. (2007). Intersensory integration of socially relevant and irrelevant stimuli in young vervet monkeys. Society for Neuroscience abstracts.
- Lewkowicz, D. J. & Berent, I. "Sequence Learning in 4 Month-Old Infants: Do Infants Represent Ordinal Information?", Poster presented at the biennial meeting of the International Society on Infant Studies, Vancouver, Canada, March, 2008.
- Lewkowicz, D. J., Sowinski, R., & Place, S. Developmental Narrowing of Intersensory Perception in Human Infants: Exploring the Separate Roles of Intersensory and Unisensory Processing Mechanisms. Poster presented at the biennial meeting of the International Society on Infant Studies, Vancouver, Canada, March, 2008.
- Lewkowicz, D. J. Narrowing of Intersensory Responsiveness to Multisensory Faces in Infancy Pre-conference on the Development of Face Processing. Society for Research in Child Development, Denver, CO, April, 2009.
- Pons, F., Lewkowicz, D. J., Soto-Faraco, S., & Sebastian-Galles, N. Narrowing of Intersensory Speech Perception in Infancy. Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, Co., April, 2009.
- Lewkowicz, D. J., Leo, I., & Simion, F. Can Newborns Integrate the Faces and Voices of Other Primates? Poster presented at the biennial meeting of the Society for Research in Child Development, Denver, Co., April, 2009.
- Lewkowicz, D. J. Organized symposium entitled: "The Developmental of Intersensory Integration" and presented paper entitled: "Narrowing of Intersensory Perception in Early Development" at the 10th International Multisensory Research Forum, New York, June, 2009.
- Lewkowicz, D. J. Narrowing of Multisensory Perception in Human and Non-Human Primates. Symposium paper delivered at the International Society on Infant Studies, Baltimore, MD, March, 2010.
- Lewkowicz, D. J. Discussion paper delivered at the symposium entitled: "Developmental Narrowing in Infants: Evidence From Color-Shape, Face Discrimination, and Language Studies" at the International Society on Infant Studies, Baltimore, MD, March, 2010.
- Lewkowicz, D. J. Participant in the "Undergraduate Lunch with the Leaders". International Society on Infant Studies, Baltimore, MD, March, 2010.
- Lewkowicz, D. J. Origins or Process: The Developmentalist's Dilemma. Presidential Address, International Society on Infant Studies, Baltimore, MD, March, 2010.
- Hansen, A. & Lewkowicz, D.J. The eyes don't always have it: As infants grow they shift their attention to the mouth of a talking face. Poster presented at the annual conference of the International Society for Developmental Psychobiology, San Diego, CA, Nov. 2010.

- Lewkowicz, D. J. & Pons, F. Perceptual narrowing and the development of audiovisual speech perception. Symposium paper delivered at the biennial conference of the Society for Research in Child Development, Montréal, CA, March, 2011.
- Flom, R. & Lewkowicz, D. J. Development of audio-visual temporal sensitivity between 4 and 6 years of age. Poster presented at the biennial conference of the Society for Research in Child Development, Montréal, CA, March, 2011.
- Hansen, A. & Lewkowicz, D. J. Look at my mouth when I'm talking: A developmental shift in infant attention away from the eyes to the mouth of a talking face. Poster presented at the biennial conference of the Society for Research in Child Development, Montréal, CA, March, 2011.
- Lewkowicz, D. J. The development of perception: A process oriented approach. Symposium paper delivered at the annual conference of the International Society for Developmental Psychobiology, Washington, DC, November, 2011.
- Minar, N. J., Hansen, A. M., & Lewkowicz, D. J. The role of face-voice synchrony and linguistic experience in infant attention to talking faces. Poster presented at the annual conference of the International Society for Developmental Psychobiology, Washington, DC, November, 2011.
- Hansen, A. M., Minar, N. J., & Lewkowicz, D. J. The effects of early experience on infant attention to talking faces. Poster presented at the annual conference of the International Society for Developmental Psychobiology, Washington, DC, November, 2011.
- Durand, K., Baudouin, J.-Y., Goubet, N., Lewkowicz, D. J., Monnot, S., Schaal, B. Olfactory modulation of visual behavior in 4 month-old infants: Maternal odor affects visual exploration and enhances preference for mother's face. Poster presented at the annual conference of the International Society for Developmental Psychobiology, Washington, DC, November, 2011.
- Lewkowicz, D. J. Avoiding the trap of extraordinary claims in developmental studies: A focus on process not origins. Symposium paper delivered at the Jean Piaget Society annual conference, Toronto, Canada, May, 2012.
- Lewkowicz, D. J. The importance of experience in unisensory and multisensory narrowing in infancy. Symposium paper delivered at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.
- Lewkowicz, D. J. Infant learning of ordinal sequential relations in the absence of statistical cues. Poster presented at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.
- Hansen-Tift, A., Minar, N., & Lewkowicz, D. J. Infants shift their attention to the mouth of a talking face when learning to talk. Poster presented at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.
- Mangalindan, D., Lewkowicz, D. & Schmuckler, M. Infants' apprehension of higher-order hierarchical structure in audiovisual events. Poster presented at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.

- Minar, N., Hansen-Tift, A., & Lewkowicz, D. J. Development of intersensory matching of fluent speech in infancy. Poster presented at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.
- Durand, K., Schaal, B., Goubet, N., Lewkowicz, D. J., & Baudouin, J-Y. Olfactory-visual interaction in infancy: Do familiar odors influence how 4-month-old infants look at familiar and novel faces? Poster presented at the International Conference on Infant Studies, Minneapolis, MN, June, 2012.
- Lewkowicz, D. J. The critical role of experience in the early development of multisensory perception. Symposium paper delivered at the International Multisensory Research Forum conference, University of Oxford, England, June, 2012.
- Hansen-Tift, A., Minar, N., & Lewkowicz, D. J. The role of voice and motion cues in infants' shifting patterns of selective attention to talking faces. Poster presented at the annual conference of the International Society for Developmental Psychobiology, New Orleans, LA, November, 2012.
- Minar, N. & Lewkowicz, D. J. Synaesthesia in infancy: Failure to replicate Walker et al. (2010). Poster presented at the annual conference of the International Society for Developmental Psychobiology, New Orleans, LA, November, 2012.
- Tift, A., Minar, N., Lewkowicz, D.J. The Role of Voice and Motion in the Developmental Shift in Infant Attention to the Mouth of a Talking Face. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Flom, R, Lewkowicz, D.J., Barton, R. The Audio-Visual Temporal Binding Window Narrows In Early Childhood. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Minar, N. & Lewkowicz, D.J. Cross-modality Correspondences Are Not An Innate Aspect of Perception: Synaesthesia Emerges Late in Infancy. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Pons, F., Bosch, L. & Lewkowicz, D.J. Linguistic Experience Modulates Infants' Selective Attention to the Eyes and Mouth of a Talking Person. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Minar, N., Tift, A., Brandon, M., & Lewkowicz, D.J. Infants Match Auditory and Visual Fluent Speech. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Pons, F. & Lewkowicz, D.J. Infant perception of audio-visual speech synchrony in fluent speech and effects of experience. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Lewkowicz, D.J. Developmental changes in the perception of audiovisual speech and language and the role of experience. Symposium talk presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.

- de Boisferon, A-H, Dupierrix, E., Loevenbruck, H., Lee, K., Quinn, P.C., Lewkowicz, D.J., & Pascalis, O. Face-voice representation of gender in 3.5- and 6-month-old infants. Poster presented at the Society for Research in Child Development biennial conference, Seattle, WA, April, 2013.
- Lewkowicz, D. J. How self-generated experience contributes to the development of speech and language in human infants. Symposium talk presented at the International Multisensory Research Forum, Jerusalem, Israel, June, 2013.
- Lewkowicz, D. J. Development of Audiovisual Temporal Perception & Sequence Learning in Human Infants. Invited contributor to the TIMELY Workshop on “Development of Timing and Time Perception: A lifespan perspective.” University Of Granada, Granada, Spain. October 16-17, 2013.
- Tift, A. H., Minar, N., Lewkowicz, D. J. Infants Attend to the Mouth of a Talking Face at 14 & 18 Months of Age. Poster presented at the Society for Research in Child Development biennial conference, Philadelphia, PA, March, 2015.
- Pons, F., Bosch, L., & Lewkowicz, D. J. Bilingual Infants’ Attention to the Mouth and Eyes of a Talking Person: The Role of Language Proximity. Poster presented at the Society for Research in Child Development biennial conference, Philadelphia, PA, March, 2015.
- Lewkowicz, D. J. Development of Multisensory Function in Human Infants. Symposium talk presented at the American Association for the Advancement of Science, San Jose, CA, February, 2015.
- Lewkowicz, D. J. The Development of Multisensory Perception in Human Infancy & Underlying Mechanisms of Change. Invited talk presented at a symposium entitled: “Synesthesia - A Window into Brain Development”, Harvard University, Cambridge, MA, October 23, 2015.
- Pons, F., Bosch, L., & Lewkowicz, D. J. Communication and social abilities are related to 12-month-old infants’ attention to the eyes of a talking face. Poster presented at the International Congress for Infant Studies, New Orleans, 2016.
- Lewkowicz, D. J. So Many Developmental Principles: What’s A Guy to Do? Invited talk in an invited symposium (sponsored by Johnson & Johnson) in honor of Gerald Turkewitz presented at the International Congress for Infant Studies, New Orleans, 2016.
- Lewkowicz, D. J. The Emergence of Multisensory Selective Attention in Infancy and Its Role in the Development of Speech and Language. Invited talk delivered at a workshop entitled: “Beyond Language Learning”, University of Barcelona & University Pompeu Fabra, Barcelona, Spain, September, 2016.
- Werchan, D., Baumgartner, H.A., Martino, R., Lewkowicz, D.J., & Amso, D. Unisensory and Multisensory Processing in Cortex. Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX, April, 2017.
- Gangi, D. N., Messinger, D.S., Martin, K. B., & Lewkowicz, D. J. Developmental Differences in the Temporal Dependency of Infants’ Individual Looks. Poster presented at the biennial meeting of the Society for Research in Child Development, Austin, TX, April, 2017.
- Lewkowicz, D. J. Development of Multisensory Processing in Infancy & Early Childhood. Symposium talk. Multisensory Research Forum, Nashville, TN, May, 2017.

- Lewkowicz, D. J. Development of Speech and Language in Infancy: An Action-Based, Multisensory, Selective-Attention Perspective. Invited Keynote Address. Workshop on Infant Language Development, Basque Center on Cognition, Brain, & Language, Bilbao, Spain, June, 2017.
- Lewkowicz, D. J. To Be a Synesthete or Not: Can Infants Answer this Question? Invited talk delivered at the American Synesthesia Association Conference. Harvard University, Cambridge, MA, October 7, 2017.
- Lewkowicz, D. J. Development of Multisensory Perception and Attention in Infancy and Why It Matters for Cognitive and Social Development. Symposium paper delivered at the Jean Piaget Society conference, Amsterdam, Netherlands, May 31, 2018.
- Lewkowicz, D. J. Early Experience Shapes the Development of Selective Attention and Multisensory Processing in Human Infants. Symposium paper delivered at the International Multisensory Research Forum conference, Toronto, Canada, June 16, 2018.
- Lewkowicz, D. J. Serial Pattern Learning in Infancy. Invited talk. Workshop on Statistical Learning, Québec City, Canada, August 20, 2018.
- Lewkowicz, D. J. Discussant. Workshop on Statistical Learning., Haskins Laboratories, New Haven, CT, December, 2018.

CERTIFICATE OF SERVICE

I hereby certify that on this date, I electronically filed the foregoing paper with the Clerk of Court by using the CM/ECF system.

Date: 9/26/2021

/s/Rita Bettis Austen
Rita Bettis Austen