

ISLAND LAB

NEWSLETTER



A Letter to Caregivers

It's been an exciting year at ISLAND! We've welcomed new postdocs, graduate students, and staff onto the team, as well as the many hard-working research assistants (RAs) who assist with data collection, coding, and science communication efforts! We are continuing data collection on our COVID-19 and Perinatal Experiences (COPE) Project and have recently launched a new study, Online Remote Child Assessments (ORCA) that aims to decrease barriers to participating in research. More information on projects and recent publications below!



IN THIS ISSUE

MEET THE LAB!

LAB UPDATES:

CONFERENCES

GRADUATION

PROJECT UPDATES:

WHAT HAS ISLAND LAB
BEEN UP TO?

NEW PUBLICATIONS



ISLAND LAB

Meet the Lab!

Director & Postdocs



Natalie Brito is an Assistant Professor of Developmental Psychology in the Department of Applied Psychology at NYU and Director of the ISLAND lab.



Denise Werchan is a Postdoctoral Fellow at the New York University School of Medicine. Denise received her Ph.D. in Cognitive Science from Brown University and is broadly interested in how cognitive development is shaped by experience in the presence of risk and opportunity in early childhood.



Annie Aitken is a Postdoctoral Fellow at NYU. Annie is broadly interested in coupling biological and behavioral assessment methods to explore the impact of early childhood experiences on executive functioning and academic achievement.

Graduate Students



Gianina Perez is a 1st year PhD student. She is interested in the impacts of bilingualism on neurocognitive development and learning during childhood.



Lissete Gimenez is a 1st year PhD student. Her research interests include identifying how individual and societal factors affect cognitive and linguistic functioning.



Sarah Vogel is a 5th year PhD student interested in how common forms of early life stress shape the development of self regulation, and mechanisms that may shape those associations.



Ashley Greaves is a 4th year PhD student interested in how adversity, particularly poverty, affects brain and cognitive development.

Staff Members



Maggie Zhang is the lab manager at ISLAND. She is responsible for day to day operations of the lab, data collection, and managing research assistants. She is interested in psychosocial factors that may impact parent child interactions and child development.



Amy Hume is a Research Associate working on the COPE and ORCA projects. She is responsible for data collection, data quality and coding. She is interested in how early life adversity influences early neurocognitive and psychopathology risk in childhood.



Tehmeena Salahin is the data manager at ISLAND. She is responsible for data storage and organization. She is interested in how environment impacts the gut-brain axis and infant neurocognitive development.

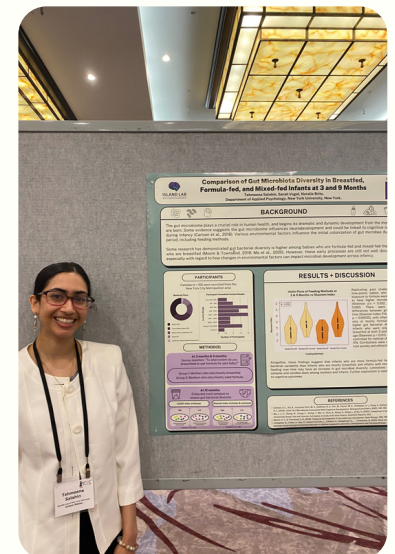
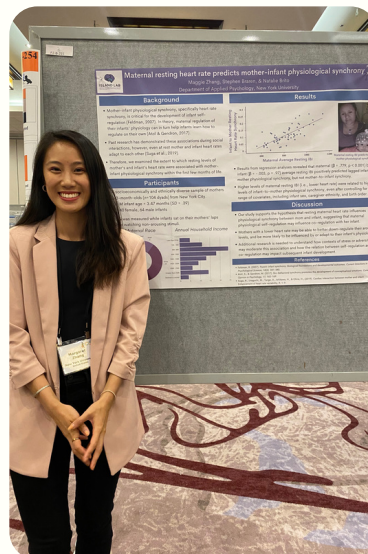
International Studies of Developmental Psychobiology (ISDP)

Our trainees and staff attended the ISDP 2021 research conference in Chicago, IL. They presented on work related to infant gut microbiome, infant attention, and maternal mental health in Latino immigrant populations during COVID-19.



International Congress of Infant Studies (ICIS)

At ICIS 2022 in Ottawa, Canada, Maggie and Tehmeena presented on findings from the SHELL study related to mother-infant heart rate and infant gut microbiome!



Congratulations to our Graduates!



Where are some of our graduates now?



Natalia Tiller was a research assistant at ISLAND, and is now at the Georgetown Special Masters Program pursuing her interest in Psychology!



Isabelle Jacques was a research assistant at ISLAND and began working full-time as a lab manager for the Affective Neuroscience & Development Lab at Harvard University!



Audrey Lin was a research assistant at ISLAND, starting in her sophomore year. She graduated from NYU with a degree in Applied Psychology and is finishing up her last year of an accelerated B.S./MA track for Counseling Psychology.



Yuhan Liu was a research assistant at ISLAND and is now at Boston College studying a Mental Health Counseling master's program.



Project Updates

Over the past several years, ISLAND has conducted several studies looking at early child development. Thank you so much to our families who made time in their busy schedules to help contribute to science! Here is a brief description of some of our past and current projects.

SHELL

The Stress, Home Environment, Language and Learning (SHELL) study launched in 2018 with the goal of examining how the early home environment impacts language and cognitive development during infancy. We concluded data collection for this project summer of 2020. We are extremely grateful to our families who were involved with our study! We have now published findings from this project related to infant attention, mother-infant interactions, and paid maternal leave. We look forward to updating you all of more exciting findings in the near future!



COPE

In response to the pandemic, we launched the COVID 19 and Perinatal Experiences (COPE) study. The overall goal of this project is to examine the impact of maternal mental health and psychosocial stress on infant neurocognitive development. We are currently assessing over 150 families at multiple points across the first three years of life, collecting survey data, behavioral observations, neuroimaging, and biospecimens. We are still currently in the data collection stage and are also making progress with data coding and analysis.

ORCA

We recently launched our new study - Online Remote Child Assessment (ORCA). Through this project, we hope to increase accessibility in research participation in order to better understand how early experiences impact child development. We are currently recruiting families with 3-12 month olds to participate in our 25 minute remote visit held via Zoom. If you are interested, please fill out this survey to see if your child is eligible:
<https://redcap.link/orcascreener>



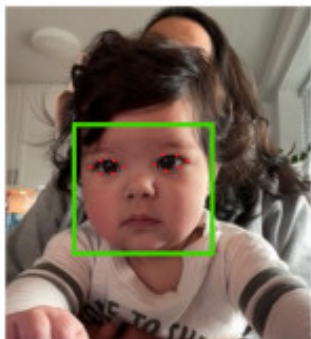
You can also scan the QR code to access the survey as well. Please email us if you have any questions about this study!

Infant Eye-Tracker

OWLET: An automated, open-source method for infant gaze tracking using smartphones and webcam recordings

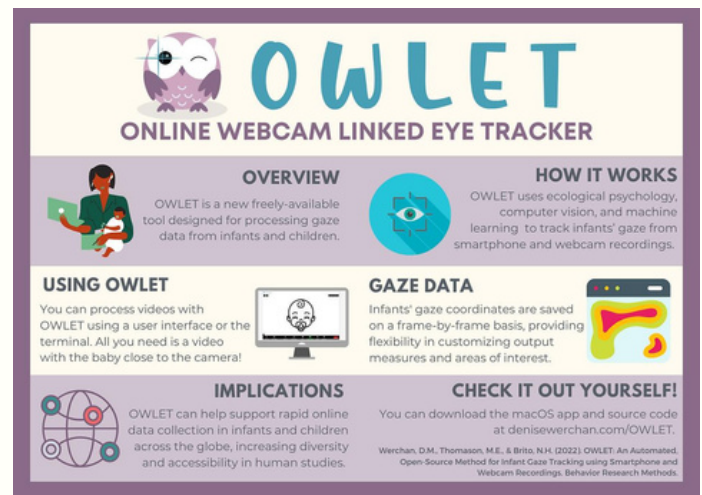
Denise Werchan, Moriah Thomason, & Natalie Brito - Behavior Research Methods

Within the research community, there have been increased shifts from conducting studies in the lab to conducting studies remotely online. This paper describes a novel methodology developed to estimate infant's gaze behavior from videos recorded using computer webcams or smartphones. Infant looking behavior is one way researchers can better understand early cognitive processes like attention, memory, and language skills.



How it works: Validating Infant's Point-of-Gaze

OWLET integrates computer vision, machine learning, and ecological psychology to estimate infants' gaze behavior, even when infants turn their heads, shift their position, or are squirmy (which is quite typical at this age!). Infant attention scores from OWLET were very similar to manual coding by a researcher. Additionally there were no differences in infant attention scores across data collected from laptops or smartphones.



Developing a remote assessment tool that addresses the need for greater diversity and accessibility in human research

Tools like OWLET may help decrease barriers to participation in child development research, which is important for the field as this may increase the ease of recruiting and testing large samples of families from historically excluded communities. Furthermore, testing infants in their own homes is necessary to better understand how experiences in the home may shape early development.



Publications

Signal in the noise: Dimensions of predictability in the home auditory environment are associated with neurobehavioral measures of infant sustained attention

Denise Werchan, Annie Brandes-Aitken, & Natalie Brito - Developmental Psychobiology

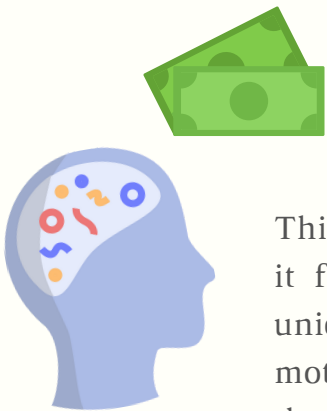
As early as 3 months of age, daily environmental noises plays a role in infants' brain and attention outcomes. This paper specifically discusses links between exposure to predictable patterns of environmental noise and the development of attention.



Paid maternal leave is associated with infant brain function at 3 months of age

Natalie Brito, Denise Werchan, Annie Brandes-Aitken, Hirokazu Yoshikawa, Ashley Greaves, & Maggie Zhang - Child Development

This paper highlights the need for a national policy of paid family leave, as it found an association between mothers with paid maternity leave and unique infant neurophysiological profiles, compared to unpaid leave mothers. This may reflect advanced patterns of brain activity, demonstrating the importance of the first months of life in socio-cognitive development.



Maternal anxiety symptoms associated with increased behavioral synchrony in the early postnatal period

Alejandra Lemus, Sarah Vogel, Ashley Greaves, Natalie Brito - Infancy

Feelings of maternal stress and anxiety are common after giving birth. We found that mothers who reported moderate levels of stress and anxiety were also more responsive to their babies' fussiness when playing with their baby. This paper suggests that certain levels of stress and anxiety are typical and could potentially be beneficial for early interactions between mother and child.

