

ISLAND LAB

NEWSLETTER



A Letter to Parents



Welcome to the Infant Studies of Language and Neurocognitive Development (ISLAND) Lab's first annual newsletter! We want to tell you all about what our lab has been up to in the past year, and what we're interested in. Since her first exposure to developmental psychology in college, our director,

Dr. Natalie Brito has been passionate about contributing to the interdisciplinary science of psychological research. ISLAND Lab has created a family of students and researchers to help better understand the factors that play a role in infant and child development. Through this experience, students are engaged in a number of tasks such as working with data, connecting with families, and bringing research to the public. When starting the lab, Dr. Brito had the initial goals of (1) decreasing barriers to enable more families to participate in studies, (2) better communicating developmental science and (3) learning from the communities we live in. Over the years, ISLAND lab has had the chance to work closely with a diverse group of families and create opportunities for both participants and students to be engaged in research. In 2020, the world experienced an unprecedented crisis due to the COVID-19 pandemic.

IN THIS ISSUE

INTRODUCING ISLAND LAB; A LETTER TO PARENTS

UNDERSTANDING BILINGUALISM; WHAT IS IT AND HOW CAN YOU FOSTER IT IN THE HOME

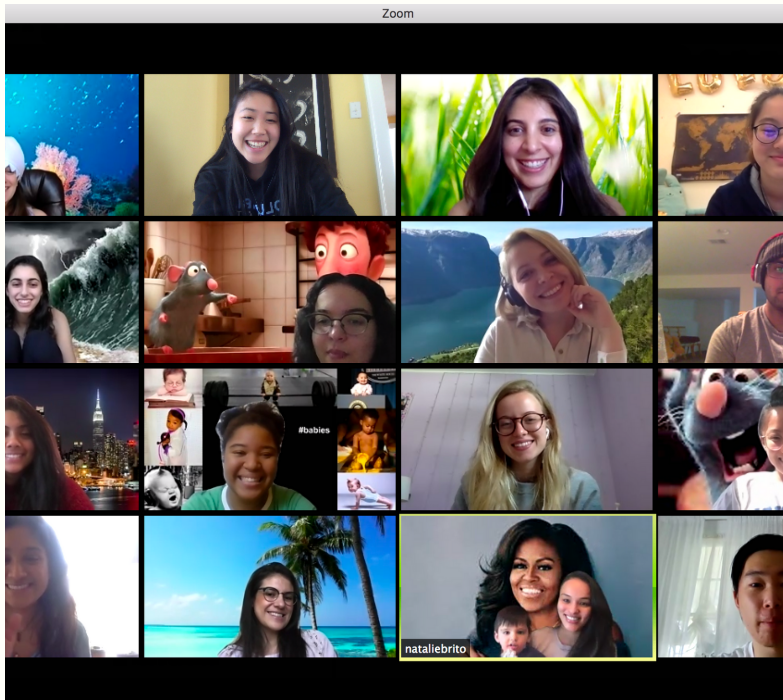
PROJECT UPDATES: WHAT HAS ISLAND LAB BEEN UP TO?

FAQs

MEET THE TEAM!



ISLAND LAB
Infant Studies of Language and Neurocognitive Development



For us at ISLAND, this meant changing the way we think about the work we do. We began to adapt to remote research and with it, came to understand the health and access inequities that a pandemic like this can bring to light. ISLAND's main goals remain the same, but the way we reach these goals have now shifted. As you will read, we have begun a new collaboration looking at the effects of COVID-19 on maternal stress and infant outcomes (see FAQs on page 6). Lastly, this newsletter and the content inside of it would not be possible without participants and researchers like you, so thank you!

- Editors: Akshar Patel, Audrey Lin, Fernanda Alonso, and Makenzie Bayless
Editor in Chief: Joy Shen

Bilingualism!

Written by Akshar Patel

Edited by Joy Shen

So what happens when a child is exposed to two or more languages early in life?

A large part of the answer to this question has been framed in the academic preoccupation of whether bilingualism is overall advantageous or disadvantageous. Such a view has surrounded the larger discussions regarding bilingualism for decades. Before the 1950's, a negative attitude generally steered the discussion surrounding bilingualism in the US. People misunderstood bilingualism and generally perceived it in a negative light. Parents sometimes heard that bilingual children might become confused with multiple languages, learn at a slower pace, and find the endeavor too difficult. As a result, many were discouraged in raising their children as bilingual. Although a consensus on the benefits of bilingualism have not yet been reached

across the scientific community, research on bilingualism has ramped up over the recent years to address the needs of the new generations of children growing up in multicultural homes. Research studies have shown that encouraging families to speak their native language or even multiple native languages within the home is actually beneficial with regards to both their child's language development and sense of cultural identity. Children exposed to two or more languages during early development learn the languages simultaneously and grow up with some degree of bilingual proficiency. With this proficiency, children develop different sets of tools for self-expression, interacting with others, and making sense of the world. In this article, we discuss gems from some of the latest bilingualism research in support of bilingual parenting.



What Can YOU Do?

Developing a routine for daily practice can help your child become more comfortable with speaking multiple languages. This can be done by setting aside time every day for language practice sessions, or by incorporating the language into the child's daily routines and activities. One family recently started singing songs in their native language while washing hands, and this has been a great opportunity for them to make the most out of small daily tasks that we all do. Singing a favorite short song with your child in the second language may be a great, lighthearted way to ensure proper hand washing and practice of a new language!



We all love a good story, and this is especially true for children. Children learn best when interested and engaged, and this has been both suggested by research and family anecdotes. Learning through storytelling can be fun and exciting, and it can be one of the best ways to get your child interested and engaged. Caregivers can recount family stories in their heritage language, and can encourage their children to share a story of their own when they are older. This would not only be a great way for your child to learn a second language, but also for your child to connect with family members.

Defining Bilingualism

Bilingualism is widely discussed in the field of developmental science, but what exactly is it? Is it just hearing two languages? Is it being able to speak at least a bit of both? What about reading and writing? Language proficiency is complex. People tend to see bilinguals as people who can communicate in both of their languages with native-like fluency, but the reality is that this level of bilingualism is quite rare and there are many different types of bilinguals. Receptive or passive bilinguals can understand a second language, but cannot speak it. A dominant bilingual is more proficient in one of their two languages and, a balanced bilingual is someone who can speak two languages proficiently, but not necessarily be native or fluent in either on.

Finally, there is the equilingual; someone who is fluent in both languages or can pass for being a native speaker in both languages. Parents should understand that being equilingual shouldn't be the goal, in fact it is something that is rarely achieved. Verbal fluency is built up with vocabulary, reading and writing skills, comfortableness with speaking the language, and just general confidence. Equal fluency of a language is often the implied end goal of any language learning endeavor; however, understanding a different language to any degree is a noteworthy goal in itself. A second language provides exposure to new cultures, new ways of thinking, and better ways of communicating.

Technology may be another great way to support your child's bilingual language learning journey. Háblame Bebé, or “talk to me baby”, is a mobile app developed by language experts and developmental scientists, including our very own Dr. Brito. This free mobile phone app helps caregivers keep track of words and phrases, in both English and Spanish, that a child learns and provides useful tips and evidence-based advice to facilitate and encourage bilingualism. Check it out at <https://hablamebebe.org>



Raising a bilingual child can come with some difficulties, but remember, the goal is not to be perfect! Expose your child to different languages in any way you can. You can encourage their language learning by speaking directly to them, reading or singing with them, and even sharing family stories. Learning multiple languages is oftentimes easier early in life, but even if your child is getting older, don't worry! Anytime is a good time to begin learning a second language.



Our 2019 Holiday Party

Members (Left to right, top to bottom): Dr. Natalie Brito, Bodhi Rastinehad, Annie Aitken, Stephen Braren, Judith Rufels, Buyong Joo, Joy Shen, Akshar Patel, Nick Tong, Sarah Vogel, Maya Metser, Alejandra Lemus, Karina Kozak, Gianina Perez, Maggie Zhang, Audrey Lin, and Carla Maddelena



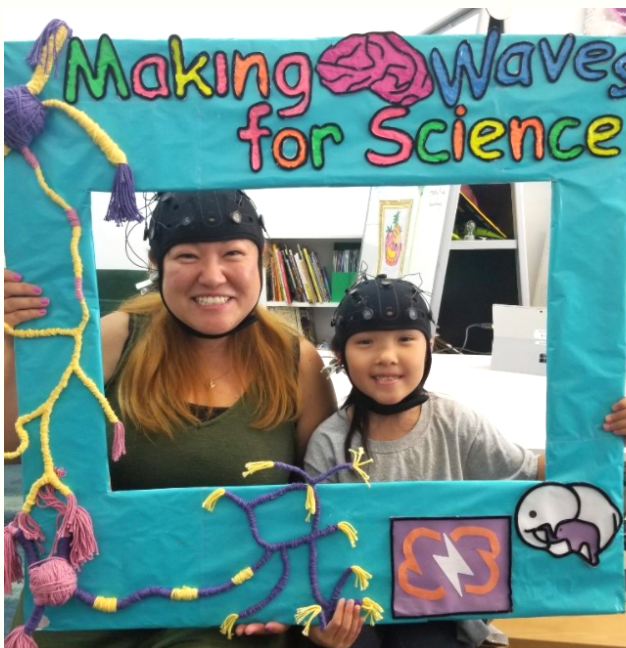
Meet Karina Kozak

Karina Kozak is ISLAND's lab manager! As lab manager, Karina oversees and manages all the projects the ISLAND is involved in. She figures out what needs to be done and delegates tasks to RAs, helps with data collection, creates manuals, collaborates with Dr. Brito to plan out strategies, and is always there to help solve problems. Karina has a passion for leveraging data to answer important questions. She hopes to transfer the skills she's developed at ISLAND more broadly into healthcare. If you've ever visited our lab, you most likely have had the privilege of meeting Karina!

Project Updates

Over the past several years, ISLAND Lab has conducted several studies looking at infant and child development through the lens of parent child interaction, socioeconomic status, language, and more. None of the work we have done could have been possible without the support from all of our participants and families who have spent time with us to contribute to science. Here is some of the work we have been doing, thank you!

FINS



Early learning is a social process. Our Family Interactions and Neural Synchrony (FINS) study is a community-based project interested in examining the "back and forth" interactions between caregivers and their children. We are particularly excited to do this project in collaboration with Sunset Spark, a non-profit organization in Sunset Park, Brooklyn. Based in a predominantly working-class neighborhood with a high percentage of immigrant families, Sunset Spark offers free access to science and technology courses and activities to families in the community. Our goal was to make neuroscience studies more accessible to families who are often underrepresented in developmental science. In this study, we use EEG (electroencephalography) to simultaneously measure brain activity from caregivers

and their children during semi-naturalistic tasks. Within these families from diverse backgrounds, we are interested in how caregivers and their children initiate interactions, respond, and take turns during everyday activities like book reading or drawing. This project was led by our PhD student Ashley Greaves. A second year doctoral student, Ashley is interested in how large-scale social structures and processes may shape caregiver-child interactions and early neural and psychological development.

Where are we in this process?

Now that we have all of the data, we are analyzing it! We hope to share research papers and updates about our findings soon. We are also working with Yadira & Gaelen Hadlett, the creators of Sunset Spark, to design an activity that middle schoolers can do to work with and visualize the EEG data.

Interested in participating in one of our ongoing studies?

Visit our website at www.BritoBabyLab.com, or email britobabylab@gmail.com for more information!

SHELL

Stress, Home Environment, Language & Learning (SHELL) Study is our ongoing longitudinal study looking at how the early home environment impacts trajectories of language and cognitive development. Specifically, we are interested in how an infant's earliest experiences influence early language, memory, and socioemotional skills during the first two years of life. Our PhD students Annie Aitken, Sarah Vogel, and Stephen Braren have tested families and collected data (EEG, Microbiome, ECG) to examine different aspects of infant outcomes and parent-child interactions for this study.



COPE

Our newest study, COVID-19 and Perinatal Experiences (COPE) Study comes in response to the global pandemic that has affected families around the world. ISLAND Lab is collaborating with Dr. Moriah Thomason (NYU Langone Child and Adolescent Psychiatry Department) to examine the impact of COVID-19 on maternal mental health and child outcomes. We want to better understand how experiences of stress, social distancing, and changes in prenatal and postnatal care impact families, so that we can advocate for what parents need and contribute to better outcomes in the future.

Where are we in this process?

Currently, we are recruiting pregnant women to take part in this study and will soon begin data collection on biospecimens and infant behavioral outcomes. In collaboration with Dr. Thomason's team (www.babybees.org), this project is being led on the ISLAND lab side by our RA Alejandra Lemus. Alejandra is from Bogota, Columbia, and has her Master's degree in Clinical Neuropsychology.



FAQs

How do I talk to my kids about COVID-19?

Your kids may be wondering why they're not allowed to go outside, or why they can't see their friends or teachers right now. It's difficult to explain these changes, but here we provide a few tips on how to cope with these trying times. 1) Frame it in an age-appropriate way. That may mean telling them that "the city is feeling sick, so we have to stay inside until it gets better!" or comparing COVID-19 to something they do understand. 2) Teach them good hygiene and make it into a game! Washing hands for 20 seconds can last approximately the length of singing their favorite songs. Teach them how to effectively wash their hands and to cough into their arms. 3) This is a stressful time for everyone, so take the time to take care of yourself and process your own anxiety first. How you feel may impact your child more than you'd expect! They may pick up on your stress and anxiety and begin to feel it themselves as a result. For more information on how to talk to children about COVID-19, check out our website! We have listed a few resources that can help you navigate this uncertain situation.

FAQs (cont.)

Is screen-time safe and healthy for my child's development?

With schools going remote, and more time is spent at home, it's likely that the amount of screen-time will increase for you and your children. In determining the effects of screen time, caregivers should consider both the content and how children are being exposed to it. For young children, shows that depict realistic, and diverse settings can help foster curiosity and engagement with the world and expose children to language and vocabulary. Some examples of shows that help foster diversity and learning are Daniel Tiger's Neighborhood, Doc McStuffins,

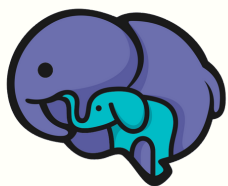


and Blues Clues and You. If you are able to, watching age-appropriate shows with your child is a great way to start conversations with your child, ask questions, and reinforce lessons from the show. However, screen time can still cause distractions for young children. Background TV and radio noise can catch your child's attention away from their task at hand, whether it be playing or learning, and make it hard for them to focus. For older children, screen-time may actually be an effective way for them to connect with peers. Video games have also been reported to increase spatial awareness and hand eye coordination. The pros and cons of media use for children is complex, but it's important to understand that every family is different and there's no one correct formula. Check out our friends over at SRCD.org where they talk to child development experts about this very topic!

How do I get involved in research?

There are many labs that would love your participation! To be a part of a study with ISLAND, email britobabylab@nyu.edu for more information, and we will try to match you with the perfect project. You can also visit our website, britobabylab.com, to learn about our current studies and read testimonials from previous participating families.

For students interested in research, check out our website britobabylab.com to fill out an interest form. ISLAND is open to all majors with an interest in child development and collaboration!



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Neurocognitive Development



Meet the Lab!

Data Science

The main goals of the Data Science team are to efficiently manage study data, conduct data quality checks, and promote Open Science. Our goal is to ensure that the work done in our lab is high quality and replicable. We are currently working on creating better ways to track missing data and compile participant demographic information.



Maggie Zhang is a recent graduate from the Applied Psychology program at NYU. During her time, Maggie wrote her honors thesis on how maternal stress impacts parent-child interactions. She leads the data science team and works on coding parent-child interactions and heart rate data.



Nick Tong is a recent graduate from the Applied Psychology program at NYU. He is interested in how societal structures influence infant and youth biopsychology. Nick can often be found coding ECG heart rate data.



Maya Metser is a rising senior in the Applied Psychology program, minoring in Spanish at NYU. She is interested in the influence of stress on infant neurodevelopment and attention. In the lab, she is responsible for coding parent-child interactions and editing heart rate data.



Alejandra Lemus has her master's degree in Clinical Neuropsychology in Columbia. She is interested in studying the association between socioeconomic status, stress, and mental health and the impact on parent child interaction. She plays an important role in the communication with Spanish speaking families and codes PCI behaviors and EEG data.

Communications

The Communications team strives to make research accessible to the public and help parents understand the research that stems from our studies. We're the ones who brought you this newsletter! We also promote our work through our website (britobabylab.com) and social media @britobabylab, bringing resources to the public and keeping everyone up to date on what our lab is doing.



Joy Shen is an undergraduate senior in Applied Psychology. She is interested in working clinically with adolescents and adults and understanding the development that leads to mental health issues later in life. Her work in the lab includes leading the communications team as well as coding heart rate data.



Fernanda Alonso has recently obtained her Master's degree from Columbia University and has just been accepted into the Communication Science and Disorders PhD. program at McGill University. She is interested in early brain and language development. In the lab, she codes the Tarullo attention task and processes EEG data in the FINS study.



Akshar Patel is a senior in the applied psychology program, double majoring in neuroscience. He recently worked on an independent study examining mechanisms by which poverty affects social attention in children with Autism Spectrum Disorder (ASD). His current work involves preprocessing EEG data for SHELL and writing creative content for parents.



Audrey Lin is a sophomore in the Applied Psychology undergraduate program. She is interested in how parent-child interactions and family settings influence developments during infancy and adolescence. She is working on Visual Paired Comparison (VPC) and LENA coding.



Makenzie Bayless is pursuing her Masters degree in the Counseling for Mental Health and Wellness at NYU. She is interested in counseling and plans to continue her education through a PhD program in Psychology. In the lab, Makenzie is a member of the Communications team working to translate science, extend the lab's findings into our community and educate others on how to put science into practice!

Community Outreach

The Community Outreach team is here to connect families to our lab. We recruit and inform families about new study opportunities, as well as guide them through the process of being a participant at the ISLAND Lab. We also organize community service events and activities in order to raise money or awareness for causes and non-profit organizations that are important to the lab.



Carol Galloway has recently obtained her Master's degree in Counseling for Mental Health and Wellness at NYU and is currently completing a clinical internship working with bilingual children and families in foster care. She is interested in the intergenerational effects of stress and poverty on language and neurological development. She is co-leading the Community Outreach team and works on coding Still Face and VPC tasks.



Carla Maddalena is a first year Master's student in the Counseling for Mental Health and Wellness program. She joined the lab because of her interest in bilingualism as well as because it allowed her to have insight on topics she had not been exposed to before. She is a co-leader of the Community Outreach team and prioritizes EEG state attention coding.



Gianina Perez is pursuing her Master's degree in Neuroscience and Education at Columbia University. She is interested in how bilingualism impacts learning and neurocognitive development and hopes to apply her experiences to implement educational interventions and provide resources for children with developmental and learning disorders. She works on coding the Tarullo attention task.



Sarah Gouriche is a rising senior in the Applied Psychology program, minoring in Media, Culture and Communication. She is really fascinated by infants and has a passion for learning about childhood development. She works closely with the coding team for parent-child interactive behavior. In the future, she hopes to someday work in creating media specifically for children.



Srinidhi Ananth is a freshman in the Applied Psychology-Global Public Health program. She is interested in studying neonatal birth defects and how they can impact early childhood development, specifically language. Srinidhi's work in the lab includes coding for EEG State Attention videos, working on FINS, and making picture-and-picture videos.