Alumni Staff Member: Allison Drash

Oh, the good ole days! The 1970s was a decade defined by civil unrest, the rise of feminism, the gas crisis, and thankfully, disco. As the spring of 1975 approached, the Vietnam War was finally coming to a resolution, and I was ending my year in the 3’s program at The Children’s School. Then, as now, the school was a loving, safe haven, where we were encouraged to explore the world around us. Each day held new adventures, whether it was learning to make homemade candles, jelly during cooking time, or letting our imaginations, and tricycles, run wild on the playground. Nothing was better than zooming around the bike circuit on those trikes…using the rubber toe cup of our ZIPS tennis shoes as brakes. By the time 1978 rolled around, I had developed a keen sense of independence and a love of music. Much like Mrs. Bird’s and Mrs. Flynn’s circle times, the circle times of the ’70’s were filled with guitar and flute music played by my teachers.

Working at the Children’s School is a truly wonderful experience, and I feel lucky to still be part of this incredible family. Where else can you walk the halls and be transported back to your earliest happy memories?

Research Spotlight

The Moving Eyes Game

The world around us is complex so maintaining focused attention can sometimes be challenging, even for adults. The goal of Dr. Anna Fisher’s project is to investigate the developmental course of deliberate selective attention and to examine factors that play a role in attentional selectivity at different points in development. In this task, researchers asked children to play a game in which they see several objects moving on a computer screen and then landing on one of the nine screen locations, each associated with a different character. Children were asked to watch a particular object while ignoring the rest of the objects. When the objects stopped moving and disappeared from the screen, children were asked which cartoon character was last visited by the object they had been watching.

Children’s performance in the Moving Objects Game will help the experimenters to map the developmental course of deliberate selective attention and improve the understanding of this basic cognitive ability, which is required for successful performance in many everyday tasks.
Research Spotlight continued …

The Listening Game
In this study, Dr. Erik Thiessen and graduate student Lucy Erickson are investigating how young children discover words in fluent speech, which lacks reliable pauses between words. One cue that may help children segment speech is its statistical structure. For instance, syllables within words tend to have a higher probability of co-occurrence than syllables that span word boundaries (e.g., the syllables in ‘pre-tty’ and ‘ba-by’ occur together more frequently than the syllables between those two words, ‘ty-ba’). Prior research with artificial languages stripped of all other cues to word-identity has demonstrated that both infants and adults are sensitive to this cue. Furthermore, this learning often happens after brief, passive exposure periods and without any conscious awareness of learning on the part of the participants. However, in studies where participants are asked to do a secondary task while listening to the speech, performance is disrupted. This suggests that attention is necessary for learning, but the specific role attention plays in the process is not yet known.

In this research, we are interested in exploring how performance on a task of sustained attention (The Moving Eyes Game) is related to performance on this word segmentation task. In the Listening Game, children listen to an audio recording of a speech stream while drawing a picture and are told that we are interested in how listening to different sounds while coloring can affect creativity. After the exposure phase, they are presented with pairs of words and asked which one sounds more like the sounds they heard before. All of the words they hear are syllable combinations that were present in the stream, but within each pair one of the words is characterized by higher statistical coherence than the other (i.e., the syllables predicted each other 100% of the time compared to 33% of the time).

The Relationship of Parenting Styles to Inhibitory Control
Dr. Anna Fisher and senior Brandee Feola are exploring the influences of parenting styles and discipline strategies on the development of children’s inhibitory control. Inhibitory Control is the ability to suppress inappropriate responses or behaviors. This ability is related to a number of important aspects of cognition, such as general intelligence, attention, and problem solving. There is evidence linking the development of inhibitory control to parenting styles, however little is known about possible influence of different discipline strategies on inhibitory control.

With this newsletter, parents are receiving a request from these researchers to complete a questionnaire about parenting styles and discipline strategies. Over the next few months, these researchers will also be assessing children’s inhibitory control and some other important cognitive functions. Specifically, the “Help the Mouse Game” will be used to measure inhibitory control and sustained attention. The “Day and Night Game” will be used to measure inhibitory control and working memory. The “Picture Memory Game” will be used to measure working memory, and the “Card-Sorting Game” will be used to measure inhibitory control and task switching. The knowledge gained from this study will further our understanding of how to foster the development of inhibitory control.

• The Help the Mouse Game
In this game, the child is told that the mouse wants to get the cheese and escape the cat. The child is asked to help the mouse with his goal of finding the cheese while avoiding the cat. The child is presented with pictures of a cat and cheese on a computer screen. To help the mouse, the child is asked to not press the button when a picture of a piece of cheese is shown, but to press the button as soon as there is a picture of a cat.
Research Spotlight continued …

• The Day and Night Game
In this game, the child is presented a card picturing the sun and a card picturing the moon and stars. Children are instructed to say “night” when they see the sun card and to say “day” when they see the card with the moon. This task is a part of the battery of tasks we will use this year to investigate the development of inhibitory control – the ability to suppress inappropriate responses.

• The Picture Memory Game
In this game, the children are presented several picture cards and asked to remember the order in which the cards are placed on the table by the researcher. When the researcher is finished placing cards on the table, children are handed the cards and asked to put the cards in the same order as before. For example, children may be presented with several pictures in the following order: a duck, a house, and a chair. Then the cards are mixed and children are asked to reproduce this order. This task assesses a basic cognitive function called working memory.

• The Card-Sorting Game
This task is designed to measure cognitive control via a computer-based card-sorting task. Children are shown cards on a computer and asked to sort them either by shape or color first. They are then asked to switch rules to sort by the opposite dimension. The example to the right shows the shape dimension of the card-sorting game. The child would be asked to sort the middle card into the either the fish or star pile. After the rules change, the child would play the color game and sort the blue objects into the blue or red pile.

Your Baby Could Be A Scientist!
The Carnegie Mellon University Infant Cognition Lab and Language & Learning Lab are looking for infants between 3 and 26 months to participate in our safe, quick, and fun studies.

What we do: We are interested in how babies learn about the world around them. Our studies last no more than 45 minutes, and take place in the infant labs located next to the Children’s School. We will have your child watch a computer display and play with some small toys while we observe his/her behavior.

To learn more or schedule participation, please contact us!
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