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The Effect of Parent Interaction on Pre-Reaching Infants' Visual Attention During an Object Manipulation Task

By

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Abstract

Infants do not begin intentionally reaching for and grasping objects until around 5 months of age. The sticky mittens paradigm (SM) provides infants the opportunity to manipulate and explore objects on their own. Active SM experience has been shown to lead to positive cognitive outcomes (Libertus & Needham, 2010), including facilitating causal perception (Rakison & Krogh, 2012). While some aspects of SM that contribute to positive outcomes are well understood (e.g., active vs. passive experience), the role of parent interactions has received little attention. In this study, SM training was used to investigate the role that parents play in their infants' learning during SM. Holt (2016) studied the effects of active vs. passive experience and parent encouragement vs. no parent encouragement on pre-reaching infants' learning using SM. Holt (2016) found that infants in the active/no encouragement condition exhibited causal perception following SM experience, while infants in the other conditions, including the active/encouragement condition, did not. The present study is a secondary video analysis of Holt (2016), comparing infants' visual attention and parents' behaviors during the SM session in the active conditions. Given the findings of Holt (2016), we hypothesized that parent interactions have a negative effect on infant attention to objects during SM, which is necessary for infants' learning. However, no difference was found between the two conditions for average bout duration on task or for proportion of clean attention. These findings suggest other aspects of parent interactions during SM might affect infants' learning, which future research should investigate.

Introduction

Physical experience has been shown to be important for learning and cognitive development in infants (e.g., see Rakison & Woodward, 2008). For very young infants, engaging in object exploration, such as reaching for, grasping, and manipulating objects, is associated with more advanced cognition (Rochat, 1989). Infants do not begin intentionally reaching for and grasping objects until around 5 months of age. Therefore, prior to four months of age, infants have not developed the motor skills necessary to reach and grasp objects yet.

To investigate how experience acting on objects affects infant cognition, researchers developed the sticky mittens (SM) paradigm (Needham, Barrett, & Peterman, 2002). The SM paradigm provides inexperienced, pre-reaching infants with an opportunity to manually manipulate and explore objects before they have the motor skills necessary to do so. In the original study by Needham et al. (2002), 3-month-old infants sat on their caregiver's lap to explore Velcro-covered objects. Infants were assigned to either the SM or control group. Infants in the SM condition received 10-14 10-minute play sessions within a 2-week span in their home, wearing Velcro mittens so that they could pick up and manipulate the toys. Infants in the control condition were not given any SM training. After the SM task, infants in both groups were allowed to engage with a novel object. The researchers found that after SM training, infants spent more time visually attending to and mouthing the object than the infants who received no training.

In a subsequent study, Libertus and Needham (2010) investigated the influences of active versus passive SM experience on pre-reaching infants' exploration of objects following training. Two- to 3-month-old infants were assigned to either the active or passive SM training condition.

In the group that received active experience, the parent demonstrated once how the objects attach to the mittens, then allowed the infant to reach on their own for the remainder of the session. In the group that received passive experience, the parents controlled the infants' hands and object exploration the whole session. It was found that infants who had active experience were advanced in their reaching behavior and showed changes in their visual exploration of agents and objects following SM training, while infants who had passive SM experience did not.

In an effort to better understand how early experience with objects might affect pre-reaching infants' understanding about objects, specifically their understanding of physical causality (e.g., when one billiard ball collides with another, causing the second ball to move) Rakison and Krogh (2012) provided SM training to pre-reaching 4 ½ -month-old infants and subsequently tested their understanding of physical causality in an infant visual habituation task. A fundamental part of infants' ability to understand the world around them is the development of physical causality, or causal perception (Piaget, 1954). In infants, causal perception is typically tested using a visual habituation paradigm, in which infants are repeatedly shown a causal or non-causal Michottian launching event (e.g., a causal event in which Ball 1 rolls into another Ball 2, and Ball 2 immediately rolls away, or a non-causal event in which Ball 1 rolls into Ball 2, but there is a 1-second delay before Ball 2 moves) during the habituation phase and their looking times to each event is measured. When the duration of their visual attention to the repeated event decreases significantly (to a criterion), signifying that they have habituated to the event and are expected to look longer to novel stimuli, the test events are presented. Test events include the event infants saw repeatedly during the habituation phase (e.g., causal event) as well as novel variations of the launching event (e.g., two non-causal events, one in which there is a delay before the second ball moves after collision, and another non-causal event in which the two balls

never touch, yet the second ball still moves as if the first one had collided into it). Infants' looking times are compared across test trials. An understanding of physical causality is inferred when infants' looking times during the test phase are significantly lower to the habituated event (e.g., causal test event) compared to both the non-causal test events. Previous research has shown that infants do not show evidence of causal perception until around 6-7 months of age (Cohen & Amsel, 1998). Rakison and Krogh (2012) hypothesized that if experience with objects is needed to facilitate the development of infants' understanding of causality, SM training may lead to causal perception in pre-reaching infants. To test this hypothesis, Rakison and Krogh (2012) provided pre-reaching 4 ½ -month-old infants with either active or passive SM experience and subsequently tested them in an infant visual habituation causal perception task. Rakison and Krogh (2012) found that infants who were given active SM experience (i.e., infants who wore Velcro mittens and played freely with Velcro-covered toys) showed evidence of causal perception while infants in the passive condition (i.e., infants who wore regular mittens and played with toys glued down to the table) did not, indicating that active SM experience facilitated infants' learning about causal perception.

Following active SM training, young pre-reaching infants have shown increases in visual attention to objects, reaching, grasping, and object exploration, and even a new understanding of causal perception compared to control conditions (e.g., Libertus & Needham, 2010; Needham et al., 2002; Rakison & Krogh, 2012; Sommerville, Woodward, & Needham, 2005). Previous research clearly shows that SM training provides young infants with experience that supports their learning about objects and relationships between objects, as is needed with causal perception. Thus far, studies have shown positive cognitive results when infants were given active SM experience in the training (Libertus & Needham, 2010; Libertus, Joh, & Needhman,

2016; Rakison & Krogh, 2012). However, research is still needed to better understand the circumstances in which SM training is most beneficial to infants.

A recent study by Holt (2016) shed light on some of the important factors involved in the SM paradigm, namely the roles of active experience and parent encouragement behaviors. In Holt (2016), pre-reaching 4- to 5-month-old infants were assigned to one of five SM training conditions: the control group or one of four experimental groups using a 2x2 plus control design (parent encouragement vs. no encouragement; active vs. passive). Infants in the active conditions moved their arms and acted on their own will, whereas the hands of infants in the passive conditions were guided by their parents. In the parent encouragement conditions, parents were told to encourage their babies in any way they deemed necessary during the SM task, whereas parents in the no encouragement condition were given the instruction not to talk.

In the experimental conditions, the play sessions were followed by a causal perception habituation test, while infants in the control condition completed the habituation test with no SM training. In the causal perception habituation test, infants were habituated to one of two non-causal launching events (either "delay," in which a ball rolled into another ball, but there was a temporal delay before the second ball moved, or "gap," in which a ball rolled close to another ball without touching it yet the second ball moved as if they had collided) and then shown three test events in a randomized order: a familiar event (the non-causal event infants viewed during habituation), a novel non-causal event (the other non-causal events infants had not seen yet), and a causal event (which infants had not seen yet). Causal perception was inferred when infants responded to the test events on the basis of causality, that is, they looked longer to the causal test event than the familiar non-causal test event but did not look longer to the novel non-causal test event than the familiar test event.

Holt (2016) found that only infants in the active/no encouragement group exhibited causal perception. Given past research showing the importance of active experience in SM training, and given that in typical SM training studies, parents are allowed to interact with their infants naturally as they see fit (Libertus & Needham, 2010; Needham et al., 2002), why did infants in the active/encouragement group not show causal perception, whereas infants in the active/no encouragement group did? One possibility is that the difference in performance could be related to differences in infants' visual attention during the SM task resulting from differences in parent interactions during the task. The purpose of the present study was to test this hypothesis.

Infants' visual attention toward objects is known to be important for their learning about objects (Rochat, 1989). The SM task allows the infant to manipulate the objects and visually attend to them. When the infant is visually attending to the objects in the session for a period of time, this is called sustained attention. Sustained attention indicates active encoding of information, which has been shown to play an important role in learning (Ruff, 1986).

Additionally, the social environment in which an infants' learning takes place plays an important role in learning outcomes and task performance (Bornstein, Tamis-LeMonda, Pecheux, & Rahn, 1991). Whether the parent is acting naturally during the session (e.g., Libertus & Needham, 2010; Needham et al., 2002; Rakison & Krogh, 2012; Sommerville, Woodward, & Needham, 2005) or the parent is restricted from talking (e.g., Rakison & Krogh, 2012), parents are playing a role in the SM play sessions. In this study, it was hypothesized that parents' behaviors during the SM play session may negatively affect the quality of their infants' visual attention to objects by interfering with their learning while they attend to the objects.

To test this hypothesis, a secondary analysis was conducted of SM training video sessions for the infants in the two active groups (Encouragement and No Encouragement) from Holt (2016). Two key measures of attention to objects were obtained and compared across the two conditions: average duration of sustained attention bouts (i.e., average duration of each attentional bout infants spent visually attending to balls and mittens) and proportion of clean attention to objects (i.e., total time infants visually attended to balls and mittens without parent interactions / total time in play session)**.** For the purposes of learning, higher quality attention to objects is expected to be marked by longer average sustained attention bouts and attention to objects without interference. Thus, based on the hypothesis that parent interactions will negatively affect the quality of infants' attention to objects during SM training, it was predicted that infants in the Encouragement group will have a smaller total average sustained attention bouts and smaller total proportion of clean attention compared to infants in the No Encouragement group.

Method

Participants

A secondary analysis was conducted on the SM training videos of infants in the active/Encouragement condition (n = 18, M_{age} = 4.344 months, SD =.505) and active/No Encouragement condition (n = 17; M_{age} = 4.182 months, SD = .477) in Holt (2016). The race/ethnicity of N=35 infants coded (16 females and 19 males, M_{age}=4.27, SD = 0.49. Range = 3.55 - 5.29) was 30 White/Non-Hispanic, 1 African American or Black, and 4 multiracial (2 Latinx and White, 1 African American or Black and White, 1 Asian and White). As reported in Holt (2016), all infant participants were healthy, full-term (i.e., gestational age of > 36 weeks and weighing > 5 pounds) infants with normal vision and hearing.

Participants were recruited via flyers, Facebook postings, university listserv, and word of mouth. Participants were also recruited via a list of infants born in the local area provided by the Kentucky Cabinet for Health and Family Services (KYCHFS). Families with infants in the desired age range were sent letters of invitation to participate in the study and were called to answer questions and schedule an appointment if interested. Those who participated received a small gift (e.g., a baby t-shirt).

Coding

In this study, the videos were coded frame by frame using Datavyu (2014) coding software by three trained experimenters (see Appendix A for coding manual). Infant attention and parent behavior were coded independently on separate coding passes.

There were three mutually exclusive and exhaustive codes for infant attention. If the infant was visually attending to the mittens and/or balls, it was coded as "on task" (see Figure 1). If the infant was visually attending anywhere except the balls and mittens, it was coded as "not on task" (see Figure 2). If the view of infants' eyes was obstructed or the direction of their gaze was unable to be determined, it was coded as "ambiguous (see Figure 3).

Parent behaviors were coded in eight mutually exclusive and exhaustive categories. These coded behaviors included: mittens off (parent was placing the infant's mittens back on their infants' hands after they had come off), parent resetting (parent was resetting the balls and/or mittens), parent toys (parent was manipulating the balls and not resetting them), parent guiding (parent controlling the infant's hands), parent in view (parent's face moves into the peripheral view of the infant and parent is not in the act of resetting), parent toys in view (parent is manipulating the balls and their face moves into the field of vision of the infant), parent

moving baby (parent moves the infant out of reach and/or sight of the balls), parent not acting (parent is not participating in any of these behaviors).

Figure 1

Figure 2

Figure 3

Calculating Variables

Onset and offset times (in milliseconds) provided by Datavyu were used to calculate durations of each behavior (e.g., duration of infant "on-task" look). Any behavior bout that lasted less than one second was excluded (Ruff, 1986) and replaced with the behavior code that preceded it. Proportion of overall attention to objects, mean duration of sustained attention bouts on task, and proportion of clean attention were calculated for each infant. Proportion of overall attention to objects was calculated as the total duration of infant attention on task divided by the total duration of their SM play session. Infants' mean duration of sustained attention bouts on task was calculated as the mean duration of bouts of an infant's sustained attention on task. Number of sustained attention bouts on task was calculated as a count of infant sustained attention bouts on task. Infants' proportion of clean attention was calculated as the total time infant is on task without parent interactions divided by total time in play session.

Training and Reliabilities

Coders were individually trained on the entirety of one video. After training, coders were deemed reliable if they exceeded a cut-off percent agreement of 90% on two different videos.

Additionally, reliability was conducted for 25% of the videos coded by each original coder. Reliabilities were conducted by an expert trained coder for the entirety of the selected videos. Videos were randomly selected for reliability to be conducted from the original coders' first to final coded videos.

To assess the reliability for infant visual attention and parent behavior codes, 25% of all subjects (N = 9) were recoded for coded behaviors by an expert trained coder who was blind to the condition of the participants but was aware of the goals and hypotheses of the study. Percent agreement was calculated for both the infant visual attention and parent behavior codes. Percent agreement for infant visual attention codes ranged from 90-99% with an average percent agreement of 96%. Percent agreement for parent behavior codes ranged from 91-100% with an average percent agreement of 95%.

Results

Some data were not normally distributed. Thus, nonparametric analyses were performed. Separate Wilcoxon rank sum tests were conducted to determine if infants in the Encouragement condition and No Encouragement conditions differed in their visual attention. First, total session durations were assessed between the two conditions. As predicted, no significant difference between conditions was found for total session durations (Encouragement: Mdn = 456949, IQR: 376215 - 488547; No Encouragement: Mdn = 494122, IQR: 360451 - 530347), Z = 1.023, p = 1.056.

To test the hypothesis that infants' visual attention to objects in the Encouragement condition was negatively affected by their parents' behaviors in that condition, Wilcoxon rank sum tests were run on the two key infant attention variables. However, no significant difference was found between conditions for the proportion of average bout duration on task

(Encouragement: *Mdn* = 9061, IQR: 5407 – 13763; No Encouragement group: *Mdn* = 8330, IQR: 5626 - 12325), *Z* = -.495, *p* = .636), or for proportion of clean attention (Encouragement: *Mdn* = .3744, IQR: .2672 - .6354; No Encouragement: *Mdn* = .4371, IQR: .2614 - .6610), *Z* = .264, *p* = .807). Box plots for the two key infant attention variables— average duration of sustained attention bouts and the proportion of clean attention—can be seen in Figures 4 and 5.

Figure 4

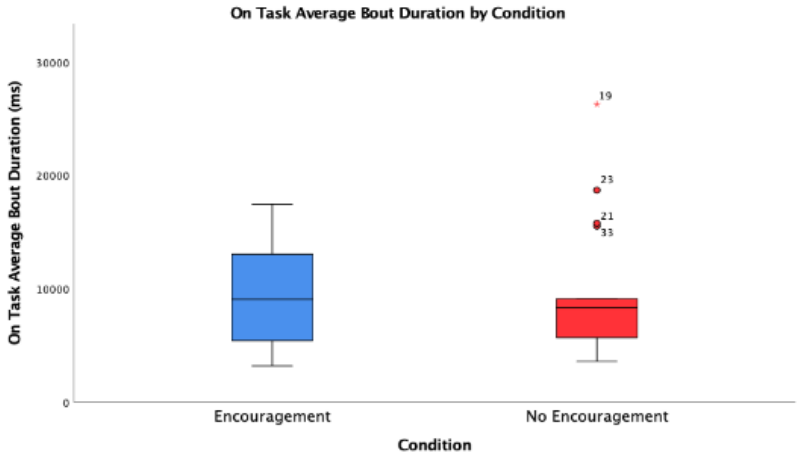
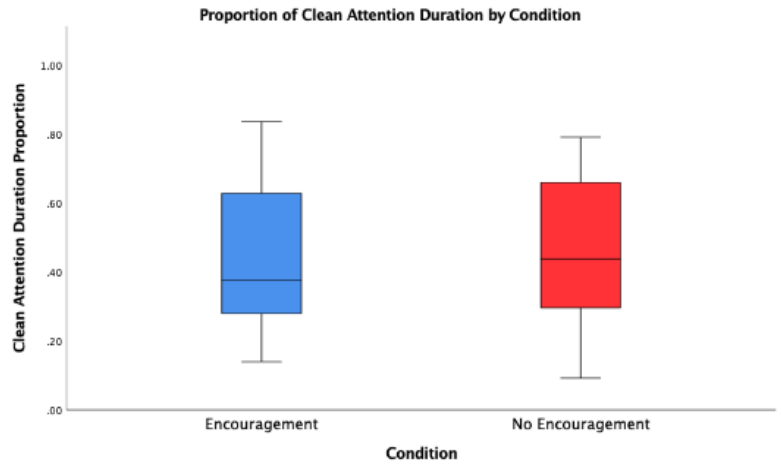


Figure 5



Discussion

In the present study, it was hypothesized that parents' behaviors during the SM play session negatively affected their infants' learning about objects. However, no significant differences between groups on total length of play session, average duration of sustained attention bouts and the proportion of clean attention were found. As expected, the total length of play sessions did not differ between conditions. Because the length of time in the play session included the total time the infant was on and off task, it was not expected to differ between conditions.

Counter to what was hypothesized, no significant differences were found between groups for the two key infant attention variables. Since sustained attention indicates active encoding of information, which has been shown to play an important role in learning (Ruff, 1986), it was hypothesized that infants in the No Encouragement group would have more sustained attention because they had less interruption from the caregiver. This was not supported by the data. Sustained attention did not significantly differ across conditions.

Finally, there were no significant differences found between conditions for the proportion of clean attention. This was surprising because it was hypothesized that the infants who were able to have more play time without interruptions from their parents would have more time to manipulate and learn about the objects. However, this hypothesis was not supported by the data. This could be due to the specific type of interactions the parents made. It is possible that not all of the parent interactions included in our parent interaction variable negatively impacted infants' attention.

It is possible that the type and timing of parent interactions were more influential than amount of infant attention to objects. It has been shown that if parent interactions are consistent in time with their infants' focus of attention leads to increased attention to objects and learning in

infants, while parent interactions that are not consistent with their infants' interactions disrupt infant attention and could distract the infant (Goldstein & Schwade, 2008; Mason et al., 2019; Riksen-Walraven, 1978). Thus, the type and timing of parent interactions could differentially impact infants' learning in the SM sessions. There could be fundamental differences in parent interactions such as pointing or resetting the balls that can visually engage the infant, while interactions such as moving the infant out of view of the balls, moving into the view of the infant or guiding the infants' hand could interrupt the infants' learning.

It is still unclear if all parent interactions in this context are hindering infant learning, or if some parent interactions are facilitating engagement. Future research should continue the investigation of SM active play sessions. For example, measuring the type of interaction the parent makes and what follows that interaction (infant on task or off task) would be beneficial to see if there is a difference in the Encouragement and No Encouragement conditions.

Future studies could also investigate how parents' presence affects the infant. If the parent is not there to interact with the infant, will there be a difference in how much the infant learns during that play session? Many parents interact by nature even if they are specifically told not to and removing them from the setting would be interesting to investigate.

While the findings from this study help us better understand the role of parent interactions in the SM paradigm, the study is not without limitations. One limitation in this study is the somewhat small sample size of 35. This is acceptable for the statistical analyses used, but could be improved. Another limitation is that the video data was from a previous study that was not set up to analyze these variables. The camera angle was adequate, but not ideal, and there was no sound. Future research should take a larger sample size of infants and run the SM play session with audio available and multiple camera angles. Having access to audio will allow the

researcher to investigate the effect that parent talking has on the infant during the play session, while multiple camera angles would help to better examine infant attention and parent behaviors.

References

Bornstein, M. H., Tamis-LeMonda, C. S., Pecheux, M. G., Rahn, C. W. (1991). Mother and infant activity and interaction in France and in the United States: A comparative study. *International Journal of Behavioral Development,* 14:21.

Cohen, L. B., & Amsel, G. (1998). Precursors to infants' perception of causality of a simple event. *Infant Behaviors and Development. 21, 713-731.*

Datavyu Team (2014). Datavyu: A Coding Tool. Databrary Project, New York University. Retrieved from http://datavyu.org

Goldstein, M. H., & Schwade, J. A. (2008). Social feedback to infants' babbling facilitates rapid phonological learning. *Psychological Science,* Vol 19:5.

Holt, N. A., (2016). *Mechanisms responsible for the development of causal perception in infancy* (Doctoral dissertation). Available form Electronic Theses and Dissertation. (Paper 2498). https://doi.org/10.18297/etd/2498

Libertus, K., Joh, A. S., Needham, A. W. (2016). Motor training at 3 months affects object exploration 12 months later. *Developmental Science.* 19:6, pp. 1058-1066.

Libertus, K., & Needham, A. W. (2010). Teach to reach: The effects of active vs. passive reaching experiences on action and perception. *Vision Research,* 50, 2750-2757.

Mason, G. M., Kirkpatrick, F., Schwade, J. A., Goldstein, M. H. (2019). The role of dyadic coordination in organizing visual attention in 5-month-old infants. *Infancy,* 24(2), 162-186.

Needham, A., Barrett, T., & Peterman, K. (2002). A pick me up for infants' exploratory skills: Early simulated experiences reaching for objects using 'sticky' mittens enhances young infants' object exploration skills. *Infant Behavior and Development,* 25, 279-295.

Piaget, J. (1954). The construction of reality in the child. London: Routledge and Kegan Paul Ltd.

Rakison, D.H., & Krogh, L. (2012). Does causal action facilitate causal perception in infants younger than 6 months of age? *Developmental Science, 15,* 43-53. Doi:10.1111/j.1467-7687.2011.01096.x

Riksen-Walraven, M. (1978). Effects of caregiver behavior on habituation rate and self-efficacy in infants. *International Journal of Behavioral Development.* Vol. 1. pp. 105-130.

Rochat, P. (1989). Object manipulation and exploration in 2- to 5-month-old infants. *Developmental Psychology,* 25, 6, 871-884.

Ruff, H. A. (1986). Components of attention during infants' manipulative exploration. *Child Development,* Vol. 57, No. 1, pp. 105-114.

Sommerville, J.A., Woodward, A.L., & Needham, A. (2005). Action experience alters 3-month-old infants' perception of others' actions. *Cognition,* 96, pp. 1-11.

Appendix

Coding Manual

Initial video coding will be conducted in Datavyu and will consist of timed-event recording for three mutually exclusive and exhaustive sets of coding schemes by noting onset and offset times to record durations of behavior. These coding schemes are considered mutually exclusive and exhaustive (ME&E), meaning that within each set, for every occurrence coded one and only one code in the set applies (Bakeman & Quera, 2011). Bakeman and Quera (2011) state that this is an appropriate, consistent, and beneficial way to code.

Coding in Datavyu will consist of individual onset and offset times for each behavior listed below. These will be used to create durations for secondary coding measures in R and Tableau.

Coding Rules

- Coding in Datavyu will begin immediately following experimenter instructions and initial parent example. Parent example will involve parents' putting the mittens on their infants and then guiding their infants' hands to the balls and attempting to then draw their infants' attention to the balls/mittens (see Sticky Mittens Instructions for more details).
- Coding will end when it is clear the experimenter has ended the play session (i.e. the experimenter and parent begin talking and the parent moves the infant away from the table, removes the mittens, etc.) or until the video ends (these might coincide).
- Coders will code first Infant Visual Attention set all the way through the video, then will code Parent Behavior set, then Experimenter Behavior set. Alternatively, one coder might code one set and a second and third coder might code the other sets.

Codes in Datavyu:

Infant Visual Attention	
Code	Definition
STOP	When the parent and baby leave the table – this ends when the parent and baby are back and prepared to play (mittens on, facing table, etc.). Note – this begins when parent takes mittens off in preparation to leave table, or picks baby up and leaves the table.
OT	"On Task" - Infant visual attention is on the mittens while engaging with the balls and/or visual attention is on the balls.
NT	"Not On Task" - Infant visual attention is on anything in the room other than mittens and/or balls. This includes the infant looking away from the table, at the experimenter, around the room, at the parent, etc.
A	"Ambiguous" - It cannot be determined if infant visual attention is on task or not on task, but there is a possibility they are on task. These looks most often occur when something is obstructing the view of the camera (e.g. a parent's arm, hair, etc.). This does not occur often.

Parent Behavior	
Code	Definition
STOP	When the parent and baby leave the table – this ends when the parent and baby are back and prepared to play (mittens on, facing table, etc.). Note – this begins when parent takes mittens off in preparation to leave table, or picks baby up and leaves the table.

M	"Mittens Off" Mittens are off - mittens have fallen or been pulled off and continues as the parent is replacing mittens. Ends when mittens have been placed back on infant's hands. This does not occur often and might occur as the parent attempts to remove the balls from the mittens and reset the balls. *Note – when coding "M" do not need to code any co-occurring behaviors the parent engages in while trying to replace the mittens, M takes precedence over other codes.
PR	"Parent Resetting" Parent is setting or resetting the balls. This includes when the parent is removing the balls from the mittens and resetting them on the table in front of the infant, and includes parent adjusting mittens as they are resetting (as long as mittens do not come completely off). Afterwards, any subsequent manipulation of the balls will be coded as PT. *Note parents are told in the instructions they received to do this if their infant brought the balls to their mouth, and/or after the balls had been on the infant's mittens for 10 seconds; however, this timing was not enforced by the experimenter.
PG	"Parent Guiding" Parent guides the infants hands/mittens to the balls and/or during play.
PT	"Parent Toys" Parent is fingering or otherwise manipulating the balls and is not in the act of resetting them. This manipulation also includes parents pointing to the balls or tapping on the table or board near the balls.
PI	"Parent In View" Parent's face moves into infants' field of view (when infant is facing the table with the balls in view) and parent is not resetting toys or mittens or replacing mittens. This behavior is coded when the parent comes past an imagined

	180-degree plane created by the baby's eyes, dependent on the baby's head tilt, into the baby's peripheral field of vision.
PTI	"Parent Toys In View" Parent is otherwise manipulating the balls (and is not in the act of resetting the mittens/balls), AND parent's face moves into infants' field of view (when infant is facing the table with the balls in view). This behavior is coded when the parent comes past an imagined 180-degree plane created by the baby's eyes, dependent on the baby's head tilt, into the baby's peripheral field of vision, AND is ALSO manipulating the balls.
PB	"Parent Moving Baby" Parent moving infant out of reach and/or sight of the balls on the table, but not resetting the balls/mittens (which would be coded as PR). This begins when parent begins the act of moving their infant out of reach and/or sight of the balls on the table and ends when they have moved the infant back into reach and/or sight.
PNA	"Parent Not Acting" Parent is not acting on the balls or mittens or in the infant's field of view. This might include parent watching the play session, looking away, sitting quietly, etc. This should account for any remaining time in the play session that is not M, R, PT, or PI.