
Encouraging infant communication and play

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PREFACE

Purpose of this manual

Some infants have more difficulty than others in tuning into the patterns their caregivers are trying to establish. They may not respond with as much delight and interest as one expects. Other babies tune in but do not take turns themselves and so do not continue the interaction as most babies do. Some babies do not use many of the communicative behaviors listed above, or they use them in such subtle ways or mixed ways that it is hard to know what the baby is experiencing.

From 2010 - 2012 Drs. Laurie Vismara and Sally Rogers carried out a project funded by the National Institutes of Health focused on exploring methods for supporting families who were concerned about possible autism symptoms in their infants under 12 months of age. We met weekly with a very small number of parents and infants to learn about the infants and to work together to support their infants' happy engagement in social communication and play during everyday parent-infant activities. The methods that we used were developed from the existing infant development research in the fields of child development, communication development, and infant psychiatry/psychology. The results of this project were published in a 2012 paper (see below for the reference).

One of the products of the project was to produce a written manual of the concepts we worked from in order to support the parents we worked with as they interacted with their infants, all of whom seemed less interested in social engagement than most infants. Some of the infants were described by their parents as not making or sustaining gaze to the parents' face very long or very often. Other parents described quiet babies who did not use their voices or bodies to send many messages to the parents about what they liked and didn't like. Some of the infants seemed quite satisfied to entertain themselves and did not seem to need much social attention. And some of the infants seemed to be so interested in objects or their own bodies that they didn't respond as much as most infants to their parents and other family members.

The manual was meant to provide families with a review of the topics that we covered in our joint sessions. Some found it helpful to review after sessions. Others found it helpful to share with other family members to keep all informed. Each chapter of the manual focuses on one infant response characteristic and provides the parents/caregivers with some ways of understanding what the infant may be communicating and ideas for strategies that may meet their infant's needs and goals while supporting their infant's social/communicative development. It is important to note that the study was not a randomized clinical trial. It was a pilot feasibility study, and the design of the study does not provide experimental proof that the concepts provided here helped the infants in the study. We have not yet conducted further studies of the method.

Furthermore, the families were largely white, American, and from middle to upper middle socio-economic status.

Since the publication of the study, we have received so many requests from families for some help that we are providing the manual in the hopes that it might provide some support to families who are worried about their infants, during the time that they are seeking help from people in their community. We wish to acknowledge the many people who worked on this study, and particularly our colleagues and partners in early autism intervention and identification research, Dr. Sally Ozonoff and Dr. Geraldine Dawson.

Sally Rogers and Laurie Vismara

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Introduction

Infants are ready to learn and respond to their environment from the moment they enter the world. They come to us with a package of ready-to-use behaviors that serve them well to help explore their world, regulate their state and make sure their basic needs are met in the first few weeks, before they have begun to learn much from interaction with the outside world.



Like infants, caregivers come with a natural, intuitive set of skills to provide the nurturing, love, and protection that infants require. Both sides bring forth an intuitive repertoire of behaviors that shape and influence each other's actions. The infant cries and the caregiver lowers her voice and picks up the infant to soothe him/her. The caregiver lowers her face towards the infant and the infant smiles in delight.

The result is an interaction characterized by synchronized, rhythmic steps and movements between the caregiver and infant. At times, the caregiver leads the "dance" by taking the first step towards attracting the infant's attention. She might call the infant's name, hold out an object for the infant to see, or raise him/her up to eye level to begin the interaction. Other times, the infant might take the lead to alert the caregiver of a need or want by vocalizing, reaching for an object, or crying.

No matter who leads, though, both partners are aware of each other, sensitive to the other's movements, and responsive to whatever messages are being conveyed through these actions. If there is a breakdown or misstep in the interaction, the dance is likely to stop. The infant may turn his/her head in an opposite direction and arches his/her back, making it difficult for the caregiver to maintain eye contact. Similarly, the caregiver may turn his/her attention to someone speaking, which unintentionally interrupts the interaction with the infant. In both scenarios, the moment of connectedness that supports the caregiver and infant to move together in order

to understand each other's behaviors, thoughts, feelings, and actions has been compromised. The dance must start over.

From birth, individual babies vary in the ways they respond to noises, people, and places as well as to their internal signals, like hunger and fatigue. Some babies seem typically calm and easy-going in responses to their internal and external environments. Other babies seem more reactive to events going on inside and outside of them. Novel environments, people, and sensory stimuli may elicit interest and curiosity from some babies, fussing and unhappy responses for other babies, and avoidant, tuned out responses in others. Some babies, when upset, may need and respond well to comfort and cuddling from others to settle themselves, and others seem even more upset by cuddling and social interaction and need to manage their responses better with a swaddle and a pacifier. These varying scenarios demonstrate the individual responses babies have to the external environment, to their internal environment, and to their own ability to regulate their emotions and their rhythms. Reading babies' cues accurately allows us to help them regulate their emotional states so that they can **relate** to the events going on as interesting or pleasant or curious instead of **reacting** to their surroundings by falling apart or by tuning out. How can you understand the baby's cues and respond in ways that help the baby be comfortable and engaged?

Babies' repertoire of social-communicative behaviors

Babies bring a whole set of cues to interactions that signal to

the caregiver what they are experiencing in that moment.

In general, we can think of infant social communicative behaviors grouped into two categories:

(1) seeking more engagement and (2) seeking less engagement. Engagement cues are behaviors that signal the infant's readiness to interact with caregivers. The infant communicates readiness to interact with the caregiver through motor behavior, facial expressions, vocalizations, looking, listening, and other approach- like behaviors. Specific examples include:

- turning eyes, heads, or body toward the caregiver when talking;
- motor movements, including reaching, leaning, crawling, or walking towards the caregiver or an object in the environment.
- vocalizations
- eye contact and ongoing engagement with the care-taker's face
- active body

Disengagement cues are behaviors that signal the infant's need for a break or reduction in the intensity of the interaction. Disengagement cues demonstrate the infant's efforts to self-regulate his or her level of arousal and adjust the amount of interaction the baby can comfortably handle in the moment. As we all know, intense interaction with another can be draining, and infants as well as

adults need to modulate their emotions inside interactions so that they do not become too intense. Some infants are able to regulate their emotional state without getting overtly upset in a timely, readable manner from birth, whereas others need more help from caretakers to maintain or re-establish a comfortable internal state. Reading babies' cues for their need for less engagement allows the caretaker to decrease the intensity of social stimulation before the baby gets upset. Specific behavioral examples pointing to the baby needing less intensity can include:

- Looking away from the caretaker's face;
- Becoming less responsive to the caretaker;
- focusing on something other than social partner
- Crying or fussing;
- Neutral expression or tense expression
- Hiccups, spitting up or gagging
- Jittery or jerky movements
- Frowning or grimacing
- Agitated or thrashing movements
- Looking drowsy or falling asleep
- Body becomes tense or turns away

By the time babies are three months of age, they are able to engage with their world for longer periods of time and they can indicate more clearly when they are interested in something or are over or underwhelmed by it. Babies tell us what they are feeling through their facial expressions, eye contact, body language movements, and sounds. A mother sings to her baby and sees her baby looking up at her and listening intently, smiling and kicking with excitement. The mother leans in to kiss her baby's face and the baby reaches for her mother's hair and coos. This baby's actions suggest that there is a good fit between the activity and the baby's capacity to process the various types of stimulation involved.

Now let's say the mother takes her baby's hands and sways them back and forth to the verse. The baby stiffens and pulls her arms away, arches her back, turns her face away from mom, and her coos turn into fusses. The baby is conveying discomfort. Mother releases baby's hands, slows the song, and waits for the baby to reorient to her, which she does after a brief pause.

The baby's responses to the song vary as the mother's actions change, and throughout, the mother is reading baby cues and adjusting her actions to find points of comfortable engagement for them within the song. Not only do baby cues and caregiver activities come into play, but also baby and caregiver temperaments are features of the interaction.

Caregiver temperament also comes into play. Some caregivers look for big responses in their babies - big smiles, loud laughter and great excitement. Other caregivers have a softer gentler approach to infants and seek a calm, relaxed style of interaction with their babies. And, as we said earlier, baby temperaments vary as well. When parent and baby temperaments are a good fit, cues and adjustments come more easily. When temperaments are at odds, with one partner enjoying and giving big displays and the other preferring quieter, calmer interactions, it can be challenging for the caregiver to read the baby and adjust without feeling rejected.

One way to think about your baby's emotional and physical responses is to use the image of an "intensity dial", one that ranges, say, from -5 to +5, with 0 marking calm and quiet, 5 marking high levels of positive excitement/emotion and -5 marking high levels of unhappiness. For example, you are introducing patty cake to a very relaxed, calm baby (level 0) but your baby's

expression does not smile or change expression to your movements and voice. So you try it a little faster or a little "bigger", and your baby's eyes widen, his mouth opens in a big smile, and he becomes more attentive and interested in the game - baby's activity level has increased in a positive direction, say a +2 or +3.

At other times your baby moves from pleasure in the interaction - the midpoint on the dial - to high activity and some of the signs of discomfort and disengagement listed above: fussing, squirming. For example, say you begin to bounce your baby on your knee and you see his interested and pleasant mood (+2) move into excitement and laughter from your baby (+5) but then moves into has turned into fusses and frowns, stiffens and averts gaze (-3). You slow things down and shift to rocking the baby back and forth on your lap gently, with gentle talk, and the baby's mood changes from stressed to happy again, with eye contact, smiles, and coos (+3). You've successfully helped modulate your baby's mood to provide comfort and connection. Your baby's cues guide you to manage your social games and interactions to support your baby's engagement with the people, sights, sounds, actions, and objects in the baby's environment.

What are our tools for helping the infant find and maintain a state of optimum engagement for learning and interacting with the world? Some of our tools include proximity, pace, and affect, all of which we vary in response to babies' cues. Proximity is our physical distance from the baby. A baby who turns his head away as his father leans closer towards him or squirms while being held may be saying, "Please back up. I need a little space." A baby who does not react to his father doing peek-a-boo until the father moves his hands and face closer to the baby's says, "Please move closer. I like this better!"

Pace is about movement and action. Sometimes babies show us that they enjoy an activity more when we turn up the dial and speed up the pace. Parents may notice that rolling a ball, making a tower out of blocks, or blowing bubbles a little faster holds the baby's attention and baby engages in the activity rather than looking at something else or crawling away. Picking up the pace and adding some excitement can help older babies get through less preferred routines such as diapering or dressing. However, caregivers at times introduce activities that involve too much action and baby responds with upset and withdrawal. A balloon that flies around the room may move too quickly and startle the baby whereas a father holding it in his hand to let the air slowly out entices the baby to watch and later reach to touch the balloon. A mother slowing down her

hand motions as she sings "Wheels on the Bus," or the "Itsy Bitsy Spider" notices her baby watching more intently and moving her hands in attempts to copy the motions.

Affect is the outward expression of feelings and emotions that parents display to their babies through facial expressions, voice characteristics, posture, actions on objects, and body movements. It can be the volume or tone of voice, a crinkled forehead, a scrunched nose, big hand motions, a smile or frown. When parents turn up their affect, their display becomes bigger, more dramatized. A father who lifts each leg high in the air to take giant steps towards his baby does so because the exaggerated movement brings a big belly laugh out of his baby. A mother making loud sounds as she pretends to gobble up the cheerios her baby holds in her hands may bring squeals of delight and gesturing from her baby to do again. Parents increasing their affect may add a little more fun to neutral caregiving moments like dressing or help harder routines like diapering go a little easier because the extra animation

animation gives something else for babies to watch and think about instead of what's happening that they do not like or care much for. However, in other situations, particularly when babies are startled, fussy, tired, hungry, ill, or crying, big displays of affect from adults may result in negative responses from baby that signal the need for for parents to calm their affect by lowering their voices, moving baby more gently and rhythmically, and providing nods, smiles, and other warm, nonverbal cues that signal that all is well to baby.

The goal of all these adjustments is to help baby attend to, to take in all that is going on around him or her, so that baby can do what babies are built to do, grow and learn. Infants learn, and grow, at a pace that is faster than at any other time of life. And learning is part and parcel of all the care activities that caregivers need to provide.

Interacting all day long

REFRIGERATOR LIST

1. Notice the “I want to engage with you” cues.
2. Notice the “I need a break now” cues.
3. Social moments hold baby’s greatest learning.
4. Daily routines hold the richest social moments!
5. Take time for social exchanges in every baby routine.
6. Being a social partner = full attention on baby.

Parenting a baby and young child is not quite like any other relationship that we ever have. Babies and young children need care all day long which can be quite



an eye-opener for young parents. Here is this sleepy baby who was sometimes hard to wake long enough for feedings in the hospital, and yet once you get home you realize that things are so busy that it's hard to find enough time for a one hour nap. Caring for the baby never stops! Laundry, feedings, changing, dressing, bathing, rocking, soothing, and sleep routines can fill all your waking hours.

This is hard on parents, but it's great for babies, because every moment spent interacting with parents is a learning opportunity for the baby. Babies' brains and bodies are built in a way that each experience actually stimulates changes in the baby's nervous system. Every interaction with a parent strengthens established connections and stimulates new connections to form in the baby's brain and motor system (which controls the baby's movements and actions). Human beings are different from every other mammal in the size and complexity of our brains and our learning capacity, and infancy is the time of the greatest brain development in all of human life. The amount of learning that happens in the baby's first three years is unique; we will never again learn anything as fast and as easily as a baby learns everything in that period.

And all this learning occurs as a result of interactions with parents and other caretakers. It may seem as if the baby is "growing himself", but many studies have shown that babies who do not have ongoing social interactions with families do not develop nearly as fast as babies who do. The amount of caretaking and social interaction that babies want and need is what stimulates their learning – not through Baby Einstein materials, not through mobiles and electronic toys, but through talk during diaper changes, social games during bathtime, songs during bedtime and nap routines, face to face interaction during feedings, interactions with people around household objects, toys and books. Interacting with your baby through talk, touch, and fun routines is the most powerful teaching technique that exists.

Helping babies learn language, social games, and play routines does not mean that parents need to set aside hours every day to spend time teaching their baby. It's a rare parent who has extra hours. Parents already spend hours every day taking care of their babies, and normal caregiving routines are great learning times for baby. Some babies almost force their parents to interact with them constantly in these caretaking routines, but other babies are easy going and do not seek out a lot of interaction. Creating interactive moments for these babies requires the parent to take the lead.

In this intervention, you will be using daily routines to encourage your baby in certain skills – particularly social, imitation, communication, language, and play skills. For babies who are 15 months and younger, we group these daily routines into six types: 1. mealtimes, 2. physical care: bathing, dressing, changing, 3. books, 4. outdoor play, 5. social games (bed, couch, lap, arms), and 6. toy play. Whatever skill you are focusing on during a particular week, you will be finding ways to focus on that skill in all 6 daily routines. In this way, you will be able to provide hundreds of opportunities for your baby to learn that skill in your daily routines with baby. And this kind of learning – across many routines, in different places and with different objects, and probably with a variety of people, results in a very resilient kind of learning for babies, learning that builds lots of brain networks and teaches babies the most important foundations for their future learning.

In each chapter, we will focus on a particular learning skill for your baby. We will think about how to foster that skill in each of the 6 types of daily activities. For most parents, after a little practice it starts to feel very natural to interact with the baby around the target skill, and many parents report that it becomes “second nature” – they don’t have to think about it anymore.

This week, think about these five types of activities. Pay attention to your routines with your baby in each of these activities, just to start to identify them for yourself. On the next page is a chart for you to put on your refrigerator or kitchen cabinet, to help you remember the 6 categories and to become aware of the times you spend in each of them, and how you already engage baby inside these activities.

During your interactive routines with baby, please be very aware of your phone use. Research studies have documented how much phone use during parent-baby interactions interrupts infant attention and infant learning from the interaction. Even checking to see who is calling you, or who has left a message, shifts your attention away from baby, and babies are extremely sensitive to parent attention shifts. A very good habit to develop is to put your phone in a specific place out of sight and out of reach as you begin an activity with baby and leave it there until you have finished your baby activity and moved to a different location. Your attention needs to be fully on baby during interactive times, including feeding and outdoor walks!. You need to be available to respond to what baby is seeing, hearing, experiencing, feeling, and doing, in order to provide the learning opportunities your baby needs.

Infant Joint Activity Categories

Books



Dressing



Outdoor play



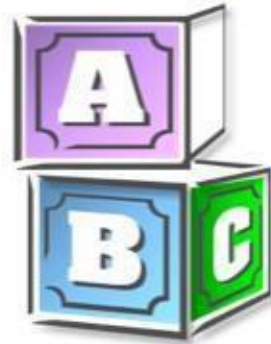
Social games



Feeding



Toy Play



Bathing



Step into the Spotlight

REFRIGERATOR LIST

1. Identify the baby's spotlight.
2. Set the stage and take your position.
3. Eliminate the competition!
4. Work your way into baby's spotlight.

There are many things that babies under one year of age cannot do yet, but one thing they do very well is look and learn. Babies see well very soon after birth, and they learn a lot about the world, the people and the objects around them, by watching objects and people in action.



They are also surprisingly good at seeing the patterns in people's actions and the patterns involved in the objects around them; they learn to expect people and objects to move and act in typical ways. They are surprised and intrigued by unexpected events, and they pay more attention to these than to familiar events, in order to figure them out.

In this chapter, we will suggest some ways that may help you increase your infant's eye contact with you, increase his or her social interest in you and others, and increase your infant's interactions with you. We hope to provide you with some strategies for positioning yourself and your infant and attracting your baby's attention that will lead to more eye contact, pleasure and engagement in social interactions for your baby.

When babies watch people, they see what people are doing, and early on they anticipate what people will do next. Not only do these sights register in the baby's eyes and brain, but they also register in the baby's body. People's bodies respond in a physical way when they see other people doing familiar actions. Their bodies internally create the same action patterns they are watching, from infancy on. This is true both for physical actions, like grasping an object, and for gestures and emotional expressions. When we see a baby imitate another person – smiling back to a friendly smile, making baby sounds in response to people talking to the baby, opening a little mouth in response to mother's mouth opening as she begins to offer a spoon, imitating a cough, sneeze, tongue wiggle, or

pattycake, we see the evidence of this connection between watching another and doing what they do.

Even when we cannot see the response, it is going on, under the surface, in the baby's body, and it links the baby and parent in a very fundamental way. (We see the same response in parent behavior – imitating a baby is an extremely common part of how parents respond to babies, and it is such a natural thing to do that they are frequently unaware of it). So, watching people closeup is a very important learning activity for babies – one of the most important learning activities that can happen, and most babies prefer to watch people and interact with them more than any other activity. We think that their brains are wired in such a way that looking at and interacting with other people is the most pleasurable activity of all for them (assuming they are not hungry, fatigued, or uncomfortable).

However, some babies do not show as strong a preference for watching and interacting with other people as other babies do. Why would that be? It's likely that there are some babies that just do not experience as much pleasure as most do in social interactions. It could be that some babies find objects and the physical world much more attractive in comparison to people than most babies do. It could also be that some babies become so excited and aroused by interaction that it is a little uncomfortable for them, and so they look away, as a way to control the overexcitement they are experiencing, as we discussed earlier. And perhaps some babies have trouble learning the

patterns in people's behavior, and so don't "read" the other person very well, don't know what to expect, and find others unpredictable. All babies are different.

However, if babies are not paying much attention to the people caring for them, then they are missing out on very important learning opportunities, because learning about communication and emotions, language and social interaction, all come from lots of experience watching and interacting with familiar caretakers. Thus, if babies are not very "tuned in" to their parents, if they are not very focused on their faces and voices and play, and if this is slowing down their social learning, then we want to increase the baby's interest in others. How do we do that?

(1) Identify the spotlight of your baby's attention.

What captures your baby's attention?. Observe what your baby really wants or enjoys. What objects does your baby like to watch, grasp, or hold? What activities does your baby like you to do? What makes your baby smile and laugh?

(2) Set the stage; take your position.

Social communication occurs especially through eyes and faces. We want babies to look at us, to make repeated eye contact, to have clear views of our faces, expressions, gaze patterns, and mouths as we talk. Try to position yourself in such a way that the baby has a very clear view of your face. You want to draw the baby's attention to your face and eyes. As much as possible, try to be close up and face to face with the baby, both with toys and with social games. There are a several ways to position yourself and the baby so that this

occurs easily.

Positions in which the baby is lying down on his or her back and you are seated over the baby or alongside the baby are wonderful for social games, finger plays, and little songs and routines.

During diaper changing time on the changing table or on the floor is a great time to be positioned face to face and to talk to the baby and do some little songs or finger games.

Sitting on the floor with your legs out in front of you with the baby on her back on your legs or between them is a great position for "creepy fingers," "one little piggie went to market," peekaboo and patty cake, "round and round the garden," tummy tickles, and thumbkin.

There are also a number of ways to seat your baby facing you, to foster interaction. For social games and some dressing activities (shirts, jackets), babies can sit on parents' laps facing the parent. Feeding your baby in the highchair gives you an easy opportunity for a face to face position at the kitchen table. Pull the baby's chair right up to one end, and point your chair to the baby's tray so you can easily face your baby for feeding. This is a great position for feeding, for vocal games, and for all kinds of imitating.

Seating a baby helps with positioning because the chair supports them and keeps them from easily moving away. Seating a baby in an infant seat, on a small chair, beanbag, high chair, or corner of a living room chair or couch while sitting on the floor in front of them is an excellent face to face position for songs, finger-plays, toy play, books, and also for some dressing routines.

When seating a baby, make sure that the baby's feet are well supported, not dangling in the air, and that their back is supported. Infants are more comfortable when their bodies are comfortable. When their chair seatback supports them and their feet are on a solid surface, they will stay put longer.

Beanbags also allow you to seat the baby in front of you. That way, social games and even book activities can be done face to face, with the book held in front of the baby, your hands pointing to pictures, and your eyes and face in front of and close to your baby's face, ready to make eye contact, facial expressions, key words, and sound effects. Some babies like to move so much that they do not want to sit for very long. Especially once crawling and walking have started, your baby may want to be on the go. In a month or two, it will probably be easier to get the baby to sit and play.

Once babies are pulling up to stand and standing safely and well while leaning against furniture, a coffee table is also a great asset. Infants like to stand at a coffee table and play with simple objects. The table should be heavy, so it will not slide when the baby leans on it, and it should be low enough that the baby can lean against it at the waist or lower chest and have arms free to handle objects and reach to you. You can position yourself on the floor across the table from the baby, face to face. If the baby is

struggling to keep his balance, he will not be able to attend well to you, so be sure the baby is supported in whatever position they may take when you want to have social interaction.

(3) Eliminate the competition. Sometimes other things in the room distract babies' attention from their caretakers. Observe your baby when you are interacting face to face and see if there are things that are pulling the baby's attention away from you. The TV or computer, toys, and other people, especially other children and pets, can distract your baby from attending to you. If that is happening, see if you can change the environment somewhat so you have less competition for the baby's attention. Put the toys away or out of sight, so that toys that you are not using are not distracting your baby. Turn off the TV and computer. Go into another room for a few minutes of social playtime if the other people in the room are distracting your baby. A big bed is often a great place for social play.

If other people are trying to interact with the baby at the same time that you are, talk with them about not interrupting the baby's interaction with you, but instead waiting until your interactions has ended and then beginning an interaction with the baby. It's better for the baby who is not so engaged in social interactions for each adult to take a turn and have uninterrupted interaction with the baby, rather than to trying to get three-way interactions going. Social interactions are the most important teaching tool we have, and we want to protect and increase the baby's interactions and attention to others.

So, even when several of your family members are together with the baby, try to interact one at a time with the baby and not interrupt the baby's attention and interaction with another person in the group.

(4) Work your way into the spotlight. Now that you know what the baby is attending to, you have eliminated the competition, and you and the baby are well positioned for face to face interaction, you will focus on gaining your baby's attention.

You have identified what interests your baby (step 1). Now experiment with how to use those interests to draw the baby's attention to (1) your eyes and face, (2) your body actions, (3) and your voice, sounds and words. Babies are attending to you when they are watching you, and when they are shifting their gaze between your face and objects. If they are not looking at you very much, then you know that it's time to experiment more with how to step into the spotlight of their attention.

Try holding the baby's favorite objects directly between your eyes and the baby's eyes as you offer them to the baby. Try taking turns back and forth with their favorite toys. In the next chapter, we will discuss more ideas for how to gain the baby's attention, but with the ideas in this chapter you will have set the stage for increased social gaze and interaction.

Summary

We have been talking about ways to foster face to face interaction. Watching the baby to see what she is focusing on tells you where the spotlight of the baby's attention is falling, so you can join the baby inside the spotlight. Carefully position yourself so that you and the baby are facing each other without too much distance between you. This gives the baby a very clear opportunity to look at your eyes, face, and mouth, and to attend to all the social information that comes from faces.

Have this kind of position be part of all interaction activities, both caretaking and play. We have also been talking about providing lots of social interaction while in these positions. For some parents, it is very natural to chat and play with their baby in this kind of position during all kinds of caretaking and play routines. For other parents, this is not such a typical way to interact with the baby. However, for babies for whom we are trying to increase their interest in other people, providing lots of exposure to social interactions during all caretaking routines and play routines is necessary. And remember to put your phone out of sight, out of reach, and out of hearing! Now have fun practicing these steps!

Here is an exercise for you:

Watch your baby to see what he or she looks at, touches, or moves toward, what brings a smile, or what creates wide-eyed curiosity. These are your baby's attention magnets and that's where you want to start: with the things that interest your baby, things that draw that spotlight of attention that you can step inside. What happens next as you join your baby and use

your eyes, face, actions, and voice while you are in your baby's spotlight? Use the Notes form on page 62 to jot down: (1) how your baby responds, (2) which activities are strong magnets for your baby's attention, and (3) which strategies to keep using to help your baby tune into you.

Begin the duet

REFRIGERATOR LIST

Check baby's signals: ready to engage?

Find baby's "comfort zone".

Pause to give baby a turn.

Silly sounds or baby's name may draw attention.

Follow baby's lead in play.

Narrate baby's actions.

Imitate baby's actions.

In the last chapter, we discussed position-

ing to support baby's attention to your face and body. In this chapter, we will talk about ways to support the baby's en-



gement and interaction with you during these face to face activities. By engagement and interaction, we mean: your baby's visual attention to your face, your eyes, your body, and the baby's active to your interactions by making sounds, moving arms and legs, and making facial expressions, like smiles or curiosity. We will also be looking for an increase in social initiations – events in which the baby starts the interaction, by looking, smiling, “calling” to you, and gesturing in ways that indicate the baby's desire for your attention.

How close is close enough?

Let's begin by talking about how close to be during face to face activities. Once you start trying these different face to face positions, you will probably find yourself at least within arm's length of baby's eyes. This is a natural place to be for feeding, changing, and touching baby. While most babies respond to a face with interest and increased looking, some babies will look away when faces come closer.

If your baby looks away as you try to gain his or her attention face to face, back up! This goes against most people's instincts; the natural tendency is to come closer or to touch the baby's face or do something to draw attention. However, there are some babies who prefer more distance in order to enjoy face to face interaction. If you see baby look away (gaze aversion is another term for this) as you come in closer, then back up a foot or two, to where you were before baby looked away. See if baby will re-engage from that distance. If not, back up a little more and try again. You will have to do a little

detective work here, to learn from baby where he or is most comfortable watching and enjoying you. That space is the baby's “comfort zone” for interaction, and that space will be your interaction zone. It may well be that after a while, when you and baby have developed a number of familiar, enjoyable social games, that baby will be comfortable with you coming in even closer, but it's not really so important how close or far out you are; what's important is baby's attention and comfortable interaction with you.

Once you have worked out the “comfort zone” and the face to face positioning, you may need some ideas for activities to do in those positions. As we said before, this comes easily to some parents, and not so easily to others. If you are not sure what to do to hold your baby's interest and increase engagement, read on. That is the topic of the rest of the chapter. First, let's talk about the kind of interaction that provides lots of learning opportunities for the baby. Here's a little description of a social interaction between a baby and a parent that shows comfortable engagement and interaction.

Dustin is a 9 month old, the youngest of three brothers, the first two of whom have autism. Dustin is crawling on the carpet in the family room, where his mother is sitting on the floor, leaning against the couch, with toys around. He crawls over to her and she says “Hey, you” and picks him up and sits him on her lap with her knees up so he is leaning against her knees, straddling her lap. They are now face to face, with their faces about 2 feet away from each other. She smiles and wiggles her fingers into his tummy while making

a funny little sound.

He looks up at her and smiles and chuckles and brings his hands up to hers. She says “is that fun?” and pulls her fingers back while smiling and looking at him. She holds her hands against her chest, fingers outstretched in a tickle position, and waits to see what he will do. He looks right at her, smiling and making a little sound, so she says “okay!” and wiggles her fingers and tickles again with a little sound. He laughs with pleasure, and so does she, and she pulls her hands back again, saying “you really like that” and patting his tummy a couple of times. She brings her hands back to her chest again, with fingers extended, and he looks at her, smiles broadly, and reaches for her hands. “You want more?”, she says, and repeats the routine one more time, to his delight.

What is important in this interaction? Several points stand out. First, the parent creates an interaction in which there is ongoing social engagement including shared gaze. Second, she begins a little game and then waits to see Dustin’s response. Each time she takes a turn, she waits to see how he responds. Third, the baby communicates each time she pauses in one way or another, so each partner is communicating with the other about what will happen next. The mother signals with her body, and the baby signals with his face, voice, and body. Fourth, she matches the intensity of her game with his signals. He invites more each time, so she delivers a little more. Finally, he communicates that he enjoys this and wants more in several different ways – with his gaze, with his facial expression – smiles, with his voice, and with his hands and

body. What’s more, he combines several different communications all together: in the last round of the game, he smiles **and** laughs **and** looks **and** reaches. That makes his signals really clear, and we are looking for these “bundled communications”.

The fact that Dustin is increasing his communications with each turn means that his mother’s continuation of the game is a well-fitted response to his cues. This is what we are aiming for: a duet between two active partners who are communicating with each other with their faces and bodies.

How to start

Sometimes it’s hard to figure out how to begin a social interaction with a baby. If you are set up in a good face to face position and baby is looking or smiling at you, you can always begin with a smile and say, “Hi, baby! What’s up?”, maybe with a little touch or hand clap.

For a baby who is not looking or smiling at you after you are all set up face to face, you can call her name and make a little noise (blow a raspberry, click your tongue, say “I’m gonna get you”), maybe follow with a gentle pat or tickle on the tummy. Sometimes babies like more intense interaction, like picking the baby up and nuzzling her neck, or patting her hands or feet together, or singing to her. The baby may respond to noises from a favorite toy, like a rattle or squeeze toy that you hold near your face. When the baby turns to the sound, there

you are! You can repeat the sound a few times, waiting for the baby's response, and then try the social game.

“Where you lead, I will follow”

Sometimes parents see their infants focused on something, but the parents try to draw their infant's attention into something new, something that doesn't correspond with the baby's current focus of attention. For example, the baby might be engaged banging with a spoon on the highchair tray. If the parent interrupts this activity by taking the spoon away (it's noisy, after all!) and tries to engage the baby in a different toy, the baby may ignore the parent or become angry and upset, which can make the parent feel discouraged or frustrated by the baby's lack of positive response to the new activity.

If the baby is already focused on something, it is usually more successful if you follow baby's attention and join in baby's interest/activity/objects, creating a social game with it, rather than trying to change the baby's focus of attention. In that way, you add social interest to the activity. How do you join in? By narrating, admiring, helping, and imitating.

Every story needs a narrator.

Joining a baby begins when you share your interest in the baby's activity by watching, smiling, nodding, gesturing, (“active watching”) and commenting on the baby's actions - being a narrator for your baby. Use simple single short phrases to comment on or describe what baby is currently doing in the activity.

The reason for using simple language is to help your baby begin to hear individual words and associate them with objects and activities. If your language is too complex, then your baby may not understand which word or phrase describes the object you're holding or the action you're demonstrating. For example, if the baby is picking up a toy train on the floor, you might say, “there's the train.” As the baby rolls it, you might say, “chugachugachug toot toot” and help the baby roll it. If the baby pokes at the wheel, you might poke it and say “that's the wheel”. This act of active watching, engaging, and narrating the baby's play (without interrupting or changing the baby's focus) can help to maintain the baby's attention to the activity while you provide learning opportunities. Remember to position yourself so that baby sees your face and mouth so baby sees you looking and talking. This kind of “active listening” – watching and commenting or narrating can go on all the time you are with your baby. Your voice is there to narrate when you change a diaper, offer a feeding, give a bath, or change baby's position. Your narration creates a situation in which both of you are sharing attention to the same thing, and sharing attention is a powerful tool for baby learning. It makes language meaningful, and it puts you into the baby's attentional spotlight – on center stage!

Be a helper

Another way to attract your baby's attention is to offer help. Hand the baby toys during play or changing and bathing times after the baby indicates an interest rather than placing them out where the

baby can get them herself. Hand over bits of food one or two at a time rather than placing it all on the high chair tray during meals, while you are seated in front of the baby and narrating what's happening. When your baby reaches for an item slightly out of reach, you can respond by saying, "you want X? here's the X!" and hand it to your baby. Or you can divide something into several pieces (like breaking a cookie into bits or handing over one block at a time). More pieces means more learning opportunities for your baby to communicate with you and take in the words you say and the actions you do.

During playtime, you are a helper when you assist a baby who is struggling to complete a goal, making sure that your help is obvious to the baby. Being the deliverer of desired objects makes you an important part of the activity and helps the baby attend to you and your language. Waiting for the baby to indicate her desire for the object through gesturing, looking, and/or vocalizing before you give it encourages interaction and communication.

For older babies (12 months and older) you can create a helping situation in which you sometimes put favorite toys or food items in clear plastic jars with lids so that your baby can see and touch the jar but cannot open it. Then you can offer help by extending your hand and asking if the baby needs help and open the jar and give the baby the desired object. When your baby recognizes the object in the jar, he may indicate interest in getting it, and may look from the jar to you and back, or make a sound while looking at the jar, or mouth the jar, or pat it

with his hands. Even if you're unsure whether your baby wants the item inside the jar, you can still open the jar and give him the object. As you repeat this game over time with a few different materials, a game might develop. Your baby's sounds and/or actions are good indicators that your baby is acting on his environment and with your help over time, these actions will turn into communication.

Imitate your baby

Another way of creating interactions is to imitate or mirror your baby. Play with the same toy or object as the baby, taking turns, or use a second toy or object to imitate or copy the baby's actions so you don't have to take a toy away from the baby. For example, if baby begins to roll a car back and forth, you might use a second car to roll back and forth, imitating the speed with which the baby is rolling the car, as well as any other gestures or actions the baby produces. Positioning yourself in front of baby and imitating baby will almost certainly attract your baby's attention. If the baby is trying to put a block in a box, hand blocks to the baby one by one, and also put some in yourself. If the baby is banging a spoon on the highchair tray, get another spoon and bang in rhythm with the baby. You will very likely see a smile and eye contact come your way, especially if you are in a good face to face position. By joining baby's ongoing activity and narrating as you go, you turn a solo into a duet.

Imitation can also extend to sounds that baby makes. This strategy of imitating the baby's play helps to shift the baby's attention and builds awareness of you as a social partner.

Summary

We have been talking about ways that you can support your baby's engagement in face to face play. Entering baby's attentional spotlight lets baby learn from you. Over time baby will begin to cue you and to respond to you with gaze, voice and gestures – the beginnings of communication. Over time baby will become a more active participant in your exchanges.

Language grows from just this kind of active, communicative engagement with another person. So far we have discussed ways of beginning social interactions and waiting for baby's cues to continue. We have also discussed actively joining in baby's interests and activities to create more learning opportunities for social exchanges. We discussed "active watching" via the use of comments and narration and helping the baby even when the baby doesn't really need help, in order to join in the baby's interests and attention. We've discussed imitating baby's actions to increase attention and interaction. You'll know when you are successful – your baby will be watching you and sending some smiles, sounds or actions your way. And your phone will be out of sight and out of mind!

A practice exercise for you

Start off narrating what your baby is doing in an activity. What toys or objects does your baby have? How does he or she play with them or use them? Use your voice to describe all this, like a sports-caster might. Next, start to imitate what your baby does, taking turns with the same toy if your baby is offering it to you or with a

similar toy. Do the same action(s) that baby does and comment on what you and your baby are doing. Gradually see if your baby wants to trade the objects that you each have? Maybe your baby laughs at a playful sound you make or likes when you exaggerate your action with the toy? Explore how you can join in with actions, sound effects and words to enter into your baby's agenda. You might enjoy using the Notes form at the end of this document to jot down how your baby responds to your strategies of narrating, admiring, imitating, and helping. They are very powerful tools for social communication and interaction with babies.

Building babble

Speaking is so effortless for adults that it's hard to appreciate how much practice babies need to control their voices, form all the sounds in their language, and learn how to combine different sounds. In this chapter we will focus on three of these skills: babies' purposeful control of voice, use of the voice to send a message, and development of speech sounds, or "phonemes".



Increasing sounds

REFRIGERATOR LIST

1. Answer baby's sounds
2. Imitate baby's sounds
3. Add sound effects to actions
4. Babytalk is A-OK
5. Narrate for your baby
6. Keep it short and sweet!

Some babies are “noisy babies”. They babble and make sounds for lots of their waking hours. They play with their sounds when in their cribs, and they have lots of different sounds that they can make. Other babies are quieter babies. They don't make so many sounds, and when they do, the number of sounds they can produce is somewhat limited.

Some babies' sounds are mostly vowel sounds, like ah, and oo, and ee and gurgles and coos. Other babies use consonants in their vocalizations and they make syllables like bababa, ada, or gagaga.

They also learn to make “mouth sounds” like “raspberries” with their lips and tongue, and tongue clicks, and kissy noises with their lips. These sound effects and consonants require more coordination from the baby than the open vowels and coos, and these kinds of sounds show that the baby is developing more and more control over the muscles and structures involved in producing speech. These are the kinds of sounds we want to hear in 6-12 month olds – imitations of sound effects and spontaneous repeated syllables with several different consonants and vowels in them – sound combinations.

A second area of change you will notice during this period is a change in the sound of the baby's voice. In the 6-12 month period, babies learn the sounds of their language and they also learn the contours, or the melody, of what sentences sound like. As their vocalizations become longer and have more syllables in them, they will begin to sound like they are speaking their own “language”, with the contours of sentences and questions in them as their voices rise and fall, as well as when they are short and emphatic.

Both of these developments – more sounds, and more contours in their voices, show that the baby is learning more about language and gaining more control over his or her sounds. Babies sometimes produce sounds “accidentally”, without the goal, or an intention, to do so. The sounds are kind of random behaviors that just happen, and the baby plays with the sounds for a while because it's fun or interesting.

But once the baby starts imitating some of your speech sounds and sound effects sounds, the baby is showing more intentional control over her voice. Speech is intentional, and babies have to learn to choose to make a certain sound and then coordinate what it takes to do that - like mouth shape, tongue position, jaw movement, control of the larynx, breath control, in order to speak. It requires lots of coordination of tongue, lips, and other muscles involved to make intentional sounds.

To help babies move from random sounds to intentional sounds, it helps to imitate the baby. When you imitate the baby's sounds, the baby may begin to imitate them back. Then the baby is showing intentional control of the voice and speech system. Babies will often first be able to imitate in this way: by making the sound first, then hearing it repeated back, and then making the sound again. Sometimes parents make a sound they have heard the baby make before and try to get the baby to imitate the sound, but the baby may not imitate it.

One reason for this can be that, even though her speech muscles and organs can make that sound, it only happens "accidentally" for the baby. The baby cannot yet make a "plan" to coordinate all the aspects needed to make that sound - it's not intentional yet. Making sounds intentionally takes time and experience.

We know that the baby has gained intentional control over his or her sounds when the baby can imitate another person's sounds, or when the baby routinely

uses his or her vocalizations in a communicative way - to deliver a message to another, combined with gaze or gesture. Babies must have intentional control over their voices and sounds before they will be able to produce speech. If the baby does not yet have intentional control over his or her voice, we want to focus on building that skill. And if the baby is a very quiet baby, we want to build up more frequent use of the voice. The interventions are the same for both, and that's what we will address in this chapter: how to get those vocalizations going.

But let's start at the beginning, and that is how you will use your own speech to stimulate your baby's speech. Babies learn to talk from their parents and other caregivers, and how parents talk to their babies has a real effect on how quickly and how well babies learn to talk.

How should you talk to your baby?

There are two main approaches that you can use. First, make sure that you are using simple little words and sound effects in your games. Your voice can be part of every interaction. Don't hold back from talking "baby talk" to your baby during your games and routines. Babies enjoy the repetition, the simplified words, and the musical way that adults talk in that special way to babies. It's not true that it's bad to talk babytalk to babies, as some people think. It's helpful to babies because it draws their attention to the sounds of their language, which are exaggerated in baby talk.

Second, let's talk about narrating activities for your baby, telling the baby's story. Talking to your baby about what is going on is another very important way for your baby to learn language. Long before babies understand any words, they already have learned the sounds of their language – the individual sounds, the different contours of statements, questions, comments, exclamations. Every language sounds different. Babies learn the sound system before they learn individual words. They have to know the sound system in order to pick out the individual words, and we all know how different each language sounds. You don't have to understand a word of German or Chinese to hear the differences between them, and babies hear it too. Once babies learn the sounds of their own language, they prefer it to others, and they "tune in" to their language. The more tuned in they are, the more they are listening, and listening lets them hear the regularities in the speech – that's how they come to understand individual words. But that comes later. For now, let's focus on what goes in the baby's ears: your voice, your narration, your imitations of the baby's sounds, and sound effects. Let's look at an example.

Shawn is washing up her youngest child, 8 month old Nathan, after his lunch. Nathan's face, hands, and bib are full of pureed carrots, and cheerios cover the high chair tray, with a few in each chubby fist. She brings a warm washcloth to the high-chair and says: "Let's get those carrots off you so you can get down. Look at your face!" (She wipes his face and he protests with a fuss). "It's OK,

just got to get those carrots off." (She wipes at his lips, and it makes a little sound), "pah pah pah, there you are. And now your hands, here's one hand, wipe it all clean, here's the other hand, wipe it all clean. There, two clean hands." (She wipes the tray). "Clean this all up, you like your cheerios, don't you? Goodbye Cheerios. Wipe that bib, good, you are clean, boy, you are all clean. Let's get that bib off, here, gonna untie it, there, pull it off, oh, you pulled it off, you little rascal you. Pull off your tray, are you ready to get down?" (He holds up his hands). "You want up, okay, let me get your belt off, there, snap, off it comes, come here little man, up you go, up up up" (swings him up in the air and he laughs. She brings him into her, nestles into his neck and he responds as if it tickles), "Umm, Mama loves her Nathan" (as she cuddles him against her in a hug).

Here we see an ongoing narration of the mother's activities as she washes Nathan up, and intermittent little social games in which she switches to sound effects and simple, repeated syllables (the lip game, pah pah pah as she imitates the sound his lips make; the up game). For some parents, this kind of narration comes very naturally and they do it without thinking. For other parents, it's a new experience to talk this way to a baby so young, but it is such an important language experience for the baby that it's a good habit to take on. Go ahead and practice – there's no right or wrong way. You are just talking to the baby as if he understands, to put more sounds into the baby's ear. We say that **"we want to put into the baby's ears the sounds we want to hear come out of the baby's mouth"**.

Joining a baby begins when you share your interest in the baby's activity by watching, smiling, nodding, gesturing, ("active watching") and commenting on the baby's actions - *being a narrator (sportscaster) for your baby*. Use simple words or short phrases to comment on or describe what the baby is currently doing in the activity. The reason for using simple language is to help your baby begin to hear individual words and associate them with objects and activities.

If your language is too complex, then your baby may not understand which word or phrase describes the object you're holding or the action you're demonstrating. For example, if the baby is picking up a toy train on the floor, you might say, "train." As the baby rolls it, you might say, "chugachugachug" and help the baby roll it. If the baby pokes at the wheel, you might say "that's the wheel". This act of active watching, engaging, and narrating the baby's play (without interrupting or changing the baby's focus) can help to *maintain* the baby's attention to the activity while providing learning opportunities. Position yourself in front of the baby. Then, your baby sees your face and mouth and is more aware of your attention and your speech. This kind of active watching and commenting or narrating can go on all the time you are with your baby. It makes language meaningful, and it puts you into the baby's attentional spotlight – on center stage!

Increasing baby's sounds

REFRIGERATOR LIST

1. Imitate baby's sounds when face to face.
2. Respond right away to baby's voice!
3. "Interpret" baby's nonverbal communication.
4. Try little mouth games with baby.
5. Mouthing toys is A-ok, but binkies get in the way of "talking".
6. Books everyday - for the pictures, not the text.

Increasing babies' sounds

We have been talking about how parents can use their own language and play to support quiet babies' vocalizations and to help babies develop intentional control over their voices.

Parents can narrate, imitate, and produce sound effects in all interactions. Put these little "conversations" with baby into play, into meal times, into changing and dressing, into bathing, and into book time. This can go in on in the car, in the grocery store, at the doctor's office, on walks. All your times with your baby can include this kind of narration, "conversation", and language. In addition, here are some specific strategies for helping a quiet baby increase vocalizations and control of her voice.

When the baby vocalizes, move into the baby's line of sight and with a smile, imitate the baby's sounds as if you were taking your turn in a conversation with baby, then stop and wait for the baby to take her turn and repeat her sound. If you can be close enough that the baby can see your mouth clearly, it's even better. The baby will likely watch your mouth as you imitate her sounds; that's good because seeing how you move your mouth when you make sounds helps stimulate the baby's mouth movements. If the baby repeats the sounds, that's great, you're your turn and imitate again. Keep this going back and forth, each of you taking turns, as long as the baby is interested – it's a "conversation", baby style.

If the baby doesn't imitate you during the pause, but is watching you, make the sound again, then pause again. As long as the baby is watching you with interest, continue to make the sound while looking at the baby, then pause and wait for the baby's turn, then repeat, even if the baby doesn't vocalize. Remember, the baby's eye contact is a very important communication – a sign of baby's interest, and the baby's attention to your face is a cue, or a communication, for you to continue. Even when the baby is not vocalizing back, when the baby is watching and attending, the baby is still learning a pattern from you, is coming to expect your sounds (the baby is predicting what you will do), and is taking turns with you using nonvocal communication (gaze, gestures, body movements, facial expressions, and interest) rather than voice.

When you stop everything and attend to the baby's sounds, it tells the baby that his or her voice has gotten your attention and interest. It has led to an interesting interaction, and that by itself will help increase the baby's vocalizations and the chance that one time soon the baby will repeat back.

When the baby does make a sound, be sure to respond right away to the baby so that the baby learns that his or her voice is a powerful tool for getting attention. When the baby vocalizes, react! If you are not interacting at that moment, turn to the baby and talk, look, and smile. Make social contact with the baby.

Either imitate what the baby said or respond with something like: "I heard you! You're talking to me!"
"Hello to you, too!"

When the baby is communicating with eyes, body, hands, face, but not voice, you add the voice – say what the baby is communicating. For example, if you give a spoon of pureed peas and the baby makes a big disgust face and spits it out, imitate the face and say in an exaggerated fashion something like "yuck, yuck, yucky peas, Missy says no peas!" At some point the baby will make some sounds in response to you. Imitate the baby's sounds, and then repeat your own sound effects. So, in this example, if after you say "Missy says no peas!", the baby makes a gurgling sound, then respond, "yes (gurgle), yucky peas!" with your animated face and voice.

In this example, your narration of the baby's experience has fostered a wonderful communication from the baby where eye contact, gestures, and voice have all joined together to communicate the baby's enjoyment in the interaction. You've put on a little show for the baby by acting out baby's story, and it's led to a communication from baby. This is the magic you have been working towards! This is one of our big goals - a baby who is communicating with voice, eyes, and body, sending an intentional message about his or her feelings to another person. This is what speech will develop from, and eventually the baby will do this effortlessly and frequently inside social exchanges.

Increasing the number of different consonants, or phonemes

Babies go through various stages in their development of sounds, before they begin to form syllables that sound more and more like real words. First they goo and coo with mostly vowels and some "g" and "y" sounds. Then, somewhere around 6 months or so, most babies begin to put some consonants, using lip and tongue sounds, into their vocalizations. As their teeth come in, sounds that involve the tongue on teeth, like **d**, also start to appear. We hear the "bababa" and "di di di" patterns that we discussed earlier – babbling. In the next stage the baby can mix up her consonants in one of her "words" instead

of repeating the same consonant, producing something like “bada”, or “gaya”. This is followed by the baby stringing more and more syllables together in strings that sound something like speech, though there are no real words in it. This is referred to as “jargon”, and it shows us that the muscles and nerves that support baby’s speech, the lips, teeth, tongue, jaw, diaphragm, larynx, and breathing patterns, are all synced together. At this point, the baby will probably be able to imitate some sounds back and forth with you. It is in these imitative exchanges that babies begin to pick up words. They have to be able to imitate sounds to form words.

One strategy that parents can use to increase the number of sounds in a baby who mostly coos and doesn’t produce many consonants is to play little mouth games with the baby during the times that you and the baby are imitating vowels back and forth. A warning here is that touching a child’s face and mouth can be very aversive to babies, some more than others. If you want to try these games, be very aware of the baby’s response to your touch on face, lips, and chin. Any sign that baby does not like that means to stop and go back to what you and baby were doing before.

If you want to try these, here is an idea. Choose a time when baby is relaxed, happy, and is saying “ah” . Try very gently patting her mouth to make a “bah bah” sound as she vocalizes. You can imitate it as well. Do it briefly and stop to look for her reaction to this new activity. Look for the approach -continue the game cues or the -this feels weird and I don’t think I like - cues to decide whether to repeat it.

Another idea: while the baby is cooing “ooo”, gently place your finger under her lower lip and nudge it up to meet the top lip quickly, and then release it, which will turn the “ooo” into “boo”. If baby enjoys this and continue to vocalize, you can repeat the little nudge several times to make “booboobo”. And another idea: if you very gently bring the baby’s lips together and release fast while the baby says “ah”, you will hear “pah”. Try these games, back and forth, doing them first on your own face while the baby watches, and then with the baby, making sure that the baby enjoys all of this.

A second strategy we have mentioned before is imitating the baby’s sounds. Imitation is a powerful tool for helping babies practice their sounds, and the more practice they get, the more their speech muscles and neural control are developing, which will support more sounds.

A related strategy parents can use is to imitate back the more complex sounds the baby is making, rather than the simple sounds. By complex sounds we mean consonants and syllables. Simple sounds are coos, gurgles, and vowels. For example, if the baby is producing a series of vocalizations that include “ah, ah, aba, aba, abababa”, the parent would imitate back the “abababa” rather than the “ah”. The “ah” is a simple vowel sound, while the “ababa” is complex.

Don't stop your baby from mouthing things. Many parents stop babies for putting things in their mouths, but mouth exploration is an important part of the development of the muscles and awareness of mouth sensations. It is perfectly normal and natural for babies to put things in their mouths, and exploring with their mouths builds oral coordination.

Another aspect to encouraging more vocalizations is minimizing the use of a binky or pacifier when babies are awake. When babies have pacifiers in their mouths, they can't vocalize. Binkies and thumb-sucking are ways that babies regulate, comfort, and calm themselves, so they have useful purposes for tired, upset, and ill babies. If you are concerned about baby vocalizations, then try to limit pacifiers to these specific purposes and otherwise try not to use them during the baby's alert and active times, especially when you are engaged with baby during dressing, changing, social times, and playtimes. If you keep the pacifier in a specific storage container in the baby's room, it will make it easier to remember to limit it during active times and keep it for quiet times. The same holds for bottles, whether with milk or water. Bottles are for feeding times.

Another stimulus that interferes with vocalization is video watching. Babies are much more vocal when they are playing alone or playing with other people. Videos are mesmerizing to babies and interfere with social engagement and language development. Similarly, try not to have background music or sounds like the TV or radio on lots of the time. Quieter settings stimulate babies to make more vocalizations and they also help your speech be more prominent to the baby.

Finally, have some book time with baby every day! Babies are never too young for book routines. However, with babies, we don't actually read the books. We do what we have been doing in our interactions: simple narration (sportcasting) and sound effects and social games. Use books with simple, large pictures, holes to put their fingers in, textures to feel, mirrors to look into, etc. – the activity books that are developed for babies. These are picture books, rather than story books. Point to pictures, name what the baby is looking at or touching, add some sound effects (animal sounds, vehicle sounds, etc). Point out body parts in the picture and on the baby as well yourself. You can imitate what baby does with the book yourself. As you narrate and comment, remember to keep your language simple – two or three at a time, with frequent repetition, sound effects, singing. Try to narrate the books in a similar way each time you do them, so the baby learns to anticipate certain sounds. Try to position yourself so the baby can see your face and mouth as well as the book.

Summary

We have covered a lot of ground in this chapter. We have been discussing how babies learn to produce speech. We have talked about how speech develops from being able to produce more and more speech sounds and from imitating others' speech sounds. For babies who produce very few sounds, especially consonants, or who do not imitate others' voices easily or use their sounds socially, parents can build up a repertoire of speech sounds and vocal games through little sound making games, through adding sound effects to toys, books, songs, mouth and finger games, and other social games that stimulate babies to attend. Imitating infants' sounds back to them and developing vocal games involving rounds of imitation is an extremely helpful kind of activity. When the baby can engage in several back and forth rounds of vocalizing with you, and can imitate some of your sounds, and is producing lots of little syllables with consonants and vowels in their babytalk, you have accomplished the goal of this chapter.

Sharing object play

Babies generally become very interested in objects once they have the hand skills to grasp them. When holding toys and manipulating them, their attention is quite focused on the toy. At this age their attention is directed to one thing at a time – either people, or objects. However, as they approach the nine to twelve month period, they become able to shift their attention much more easily from objects to people, and back again.

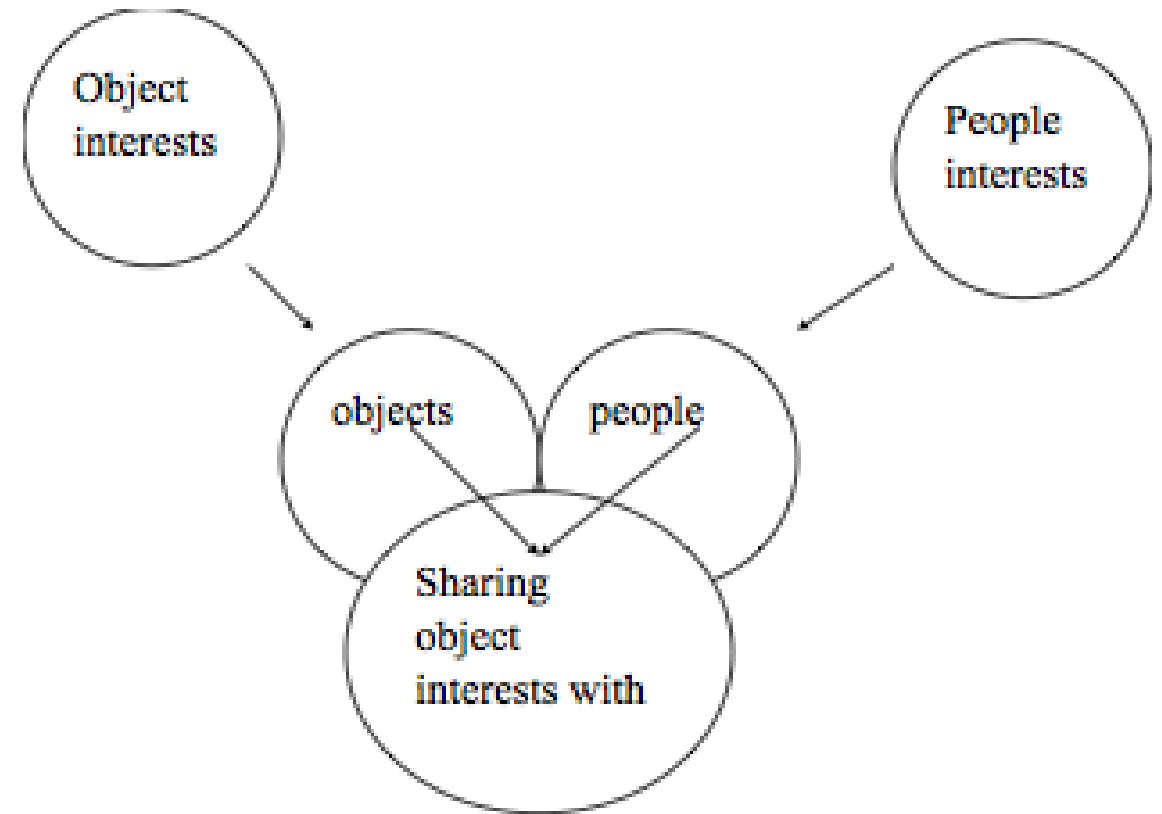


Shifting attention

REFRIGERATOR LIST: FOSTERING FLEXIBLE ATTENTION TO OBJECTS.

1. Follow the baby's interest and develop a turn-taking social game with a preferred object.
2. Methods for doing this involve sharing objects back and forth or using "double toys", one for each.
3. This helps baby shift attention from object to parent, it develops parallel play and imitation, and it fosters sharing emotions.

Once babies begin to shift their attention from objects to a person and back again, it's like their two interests - people and objects - merge, and they can now share their objects interests with their people.



This progression is harder for some babies than others. Some babies seem overly focused on objects and they have trouble shifting their attention away from objects in order to share it with another person.

In this chapter we will talk about some ways to help babies shift their attention so that they can share their interest in object play with others. By doing this, they can learn much more from their parents about objects, and language, and play.

That is the advantage of sharing object interests with others – the more mature social partner greatly expands the learning opportunities for the baby by sharing all the things the social partner already knows about the object. However, if the baby cannot attend to the social partner and take in what he or she is offering, then the baby can't learn from him or her.

Our goal is to foster the baby's attention shifting between objects and social partners, and to increase social exchanges inside object play. Before we begin to talk about strategies for increasing this kind of attention shifting, let's talk about how babies show that they are sharing their object interests with their people. There are several key behaviors we will be looking for. They are **the joint attention behaviors**.

The first way this happens is through **simple gaze shifts**. *Nine month old Nicky is sitting in his highchair sucking on a rattle, and mom is seated in front of him at the kitchen table, drinking her coffee. Nicky looks up at her while sucking, and she says "Is that good? Yum." And she takes a sip of her coffee. He looks back down at his hands, chews, and then back up again. She says, "are you still hungry? Here's some more cheerios" and hands him a handful.* Nicky's simple gaze shifts elicit comments from her which join the two of them together in the experience.

Soon after we see simple gaze shifts we see babies beginning to **give objects** to parents, offer food, put things in their mouths, hand things over and then take them back. Giving is an important way of

sharing, and it elicits a lot of social contact. **Showing** is another way of sharing that generally appears in the 9-12 month period. When babies show, they hold something up towards their parents' faces, and parents typically comment and name the object. It is often a brief behavior – baby holds it up and looks to the parents, waits for the parents' comment, and then takes it back down and continues to play. The fact that the baby looks to the parent's eyes and waits for a look and comment shows that baby is really paying attention to what the parent is attending to. Babies are now aware that parents are attending to them, or not attending to them, and showing is a very purposeful way of getting parent attention. *It's like the baby now has a sense of the mind behind the parent's eyes.*

The final sharing behavior that comes in involves gesturing – **pointing or gesturing with an open hand – to an object**. We see this both with objects that are close by – especially pictures in books – and to objects out of reach that the baby sees and wants to share with parent. The baby expects the parent to look at what the baby is indicating, and say something about it. Babies will often check the parents' face to see if they are looking at the indicated object. The baby shows that he or she understands that the parent's and the baby's attention can merge on the same thing. The baby's knowledge of shared attention is critical for language learning, because when the parent speaks during these shared moments the baby knows what is in the parent's mind – it is what they are sharing nonverbally -so

the words take on the meaning that the parents and baby are sharing - and the baby learns the meaning of the words.

All these sharing behaviors – gaze shifts, gives, shows, and points/indicates – are referred to **as joint attention behaviors** when they are used to capture attention and share interests, and they are fundamental for language development. A minute ago we said that our goal was to foster the baby’s attention shifting between objects and social partners, and to increase social exchanges inside object play. We are going to do this by fostering these four behaviors, one at a time. Now let’s talk about strategies parents can use to help their babies accomplish this.

Take center stage

For gaze shifts, parents need to be in close, “center stage”, with their baby. This makes it much easier for the baby to look at them. For babies who are uncomfortable when you are directly in front of them, move a little to the side of center. Find their comfort spot. Now it’s time to do a little detective work. What can you do that will get the baby to shift gaze from the object to you, and will not irritate the baby? Here are some things to try.

Comment and add sound effects

Using short little phrases, narrate what the baby is doing with an interesting, lively voice. “Bang bang bang” – if the baby is banging, or “yummy yum” if the baby is

mouthing. Does the baby look at you? If so, smile and repeat what you said. If baby doesn’t look, try again with a different sound, different volume, or different level of animation. See what you can do to catch baby’s attention.

Imitate the baby

Get an identical object and copy what the baby is doing while adding sound effects. If the baby reaches for your object, hand it over and take baby’s. If he or she wants both, get a third. This is not the time to work on sharing – baby is too young, and that’s not our goal. Our goal is attention shifts, and that’s what to stay focused on.

Take a turn

Hold your open hand by the object, and ask “my turn, or mama’s turn, or give me”. If the baby gives it to you, take it, hold it up briefly and name it (show to the baby), and then do something interesting with it quickly. You might imitate the baby, or use the object in a different way or make a happy comment: “Wow!”, “cool ball”, etc, and then give it right back to the baby. If your baby does not give it, don’t get into a struggle for it. Try taking a second object to demonstrate the action. After repeating it a few times, you can try asking again for a turn. Or you can try swapping your item for what your baby is holding and again creating an effect that your baby might find enjoyable. As you try these different strategies, though remember that we need this to stay happy and fun for the baby and for you.

Giving to share attention

Once gaze shifts are occurring frequently during object play, we will move to **giving to share attention**. For giving, we want to consistently pair the gesture of an open hand with the words “give me” when we are asking the baby to give. We will also be giving many things to the baby, and when we give, we will target handing the object to the baby but also requiring that the baby reach to take it, while saying “here you are, here’s the X, want the X” etc.

Strategies: When the baby is offering you an object, hold your open hand to the object and ask “give me” or “give it to me”. Hold your open hand under the object and help the baby put the object in your hand. If she doesn’t do it right away, then one option is to quickly take it, do something funny or interesting with it, and give it right back to the baby. Only use this strategy if it will not be upsetting to the baby, and give it back fast before the baby is upset. Don’t wait for baby to “request” it. The idea here is to let baby know that giving something to you is a safe thing to do, it makes something fun happen, and the baby always gets the toy back, so there is no reason to avoid giving it to you. It’s really important not to get into a struggle for the toy. We need this to stay happy and fun for the baby and for you. DO NOT use this when you want to take the toy away!

Giving lots of objects

With materials like cheerios, raisins, little pieces of fruit, gold- fish, etc, have them in a bowl and give them to the baby one at a time, several in a row. Then ask the baby to

give you one in your hand and help her follow through, and eat it with great gusto. You can also do this by finger feeding one to the baby and then leaning in close and asking the baby to feed one to you and help him to follow through. Make a fun eating display with sound effects, exaggerated emotions, or funny eating actions and quickly repeat - you feeding the baby, the baby feeding you.

Objects in containers

The same kind of game can occur with objects in a container. The metal containers that you store Christmas cookies in works well for this because of the sound it makes. Use 1” blocks, ping pong balls, or fat pegs that are easy for the baby to hold. Put the container between you and the baby on the floor or high chair tray, put the objects around the can, pick up one, drop it in the can, saying “block in”, boom”, etc and then give one to the baby – “here” - so the baby can drop in. Do this several times, and then give one to the baby and put your hand out and ask, “give me”, and help the baby give you and drop it in. Repeat this sequence as long as it is fun for baby and rewarding for you!

Showing toys to others

Helping baby learn to show objects can develop out of the giving routines we just described. To develop showing, we will respond differently to the baby’s offer of the toy. When we were helping them learn to give, we took the toy when they offered it, and then gave it back. To help them learn to show, we will not take the offered toy; instead we will pay a lot of attention

to it and make a fun display by smiling and commenting enthusiastically on the object. At the end of our display, we will also say “you showed me the X”.

We also want baby to learn the right words for showing, so once the baby is used to showing by extending objects to you and having you comment on them, you will start to ask for the show by pairing the words: “Show me” with a “give me” gesture directed to an object the baby is holding. Say “show me the X” and hold your hand out to prompt the baby to give you the object. But once the baby offers, don’t take the object: just admire it very enthusiastically, providing a fun display.

We want to show objects to baby routinely during this period, so they see us showing regularly. To do this, we will pick up an interesting object, hold it in front of the baby while saying, “(name), look. Look at the X, or look, it’s a X” and then giving it to them as soon as they look. The timing is really important – give it the same moment that they look at the object.

Summary

The focus in this chapter was on supporting your baby to share his or her attention to objects with you and to shift attention from objects to people and back again. Looking back and forth, and using hands as well as eyes to share, show, point to, and give objects, are the main ways babies share attention. Parents put language to the baby’s sharing actions, and to their own, and this becomes one of the most powerful tools parents have for helping their children learn language.

Here is an exercise for you

Before you give something to your baby, see if he or she can look between you and the toy or item when you name and hold it somewhat near your face and out of your baby's reach. If your baby needs a little more encouragement, see if adding playful sounds about the item helps your baby look at you. Or you might add a step to that gives your baby another reason to look at you before you hand over the thing. Let's say your baby wants his sippy cup. Show your baby how you open and take off the lid as you name each action and add "ugh" sounds to help draw your baby's eyes from the cup to your face. Hold out the liquid to show your baby as you name and pour it in the sippy cup. See if your baby glances at you when you pause pouring and resume pouring when he does. Hold out the sippy cup lid to show your baby that now the lid goes on with "ugh" sounds added again as you turn the lid. What could have been a single action of filling up your baby's sippy cup has now turned into three steps for your baby to look at you as you do each action. Use the Notes form on page 63 to jot how your baby responds to other activities and ideas for sharing interests with objects.

Flexible play

All babies play repetitively with objects and with their bodies. They don't have very many ways to act on objects, so they tend to do the same thing over and over again. Repetition helps develop motor skills – you know that “practice makes perfect”. The desire to repeat is nature's way of assuring that babies get enough practice to learn to use their new skills easily.



Encouraging flexible play

REFRIGERATOR LIST

1. Model other acts the baby does with objects.
2. Imitate the baby.
3. Imitate, and then vary.
4. Imitate and then add other objects.
5. If baby has trouble with this, switch to other preferred toys and games.

Usually, babies tend to repeat their newest skills the most. However, some babies seem to spend a lot of time repeating movements and actions they learned a long time ago instead of practicing their newer skills and learning more mature ways to play. Or, they spend all their time doing one thing with an object (or a sound or a body movement) rather than playing with it in varied ways. While this is typical and adaptive for babies younger than 9-12 months, who are mostly learning how to move their bodies intentionally, older infants and toddlers benefit from engaging in varied play because of the range of learning opportunities that occur when they vary their ways of handling objects, explore a range of object characteristics, and use their bodies to act on a wide range of materials. In this chapter we will focus on ways to help babies widen the range of actions and objects in their play.

Flexible play with objects

Here are some ideas for helping babies vary their ways of playing with objects. In general, our first approach is to encourage the baby to use the full range of skills the baby already has. We start by thinking about all the ways the baby is capable of playing with or exploring objects. Most 6-9 month olds can pick up, mouth, bang, grasp, and shake objects. Nine – twelve month olds can also hold an object in each hand and bang them together, move them from one hand to the other, bang both on the table at once, drop objects, throw them, put them into containers, etc. Take a little time as you play with your baby with various objects to make a mental or, even bet-

ter, a written list of all the different actions your baby uses on objects. This will help you to think about all the different actions you can encourage your baby to try.

There is one other general point to make, and that is the importance of creating fun activities. You want to be creating fun, pleasurable activities for the baby. It's the fun that motivates babies to try something different, to pay attention, to keep the play going. You know your baby and you probably have a number of ideas for what he or she will enjoy. When the baby responds with interest, reaches, smiles, increased activity, or other signs of enthusiasm, you know that what you did was pleasurable for the baby. Sometimes the things we try are clearly not fun for the baby. They get serious and still, or they pout, get mad, cry, look away, or withdraw and we know that that didn't work and we have to try something else. However, sometimes when we try something for the first time, the baby doesn't know if it's fun or not. It's new, it's different, and the baby doesn't know what to expect. The baby is kind of neutral, or a little surprised and a little wary. When we get this response, it's generally worth trying the new idea again, right away, maybe a little more gently, so the baby learns what to expect. Over two or three repetitions, you may see the baby "warm up" and enjoy the activity more.

However, sometimes, the neutral baby is a little worried. His eyes may be blinking a few times, his face may be

serious, or he may be pulling back just a little, or he may be very still. In this situation, you may choose to repeat the new idea, but do it more gently and watch the baby carefully. If the baby looks just as worried, or more worried, don't continue. If the baby doesn't look more comfortable after the second and third time you did it than the first time, it's better not to continue. Don't repeat it any more. We don't want to lose the baby's attention or engagement. Here are some ways to try to help the baby use some other actions.

Imitate the baby

This game involves picking up another set of the same objects or materials and imitating the baby. Draw the baby's attention to what you are doing, by being right in front of the baby and near. Copy the baby, adding a few words to what you are doing ("Nathan, shake shake shake?" (as you imitate shaking another rattle). "Angie, banga banga bang?" (as you imitate banging your stick on the highchair tray in rhythm with hers). The baby may pause and watch you make the action. If so, wait a few seconds and see if the baby will imitate what you just did. If so, that's exciting! Go ahead and respond and give the action a name ("Yes! You banged it!" Banga banga bang!") and take another turn yourself to imitate the action and make some sounds. Now the two of you are taking turns with this action and it has become an imitation game. Fantastic!

Imitate and then vary

This activity follows from the one we just described. After a few rounds of imitating, it can become repetitive, and maybe a little boring. If so, change what you are doing with the materials during your turn, using another of the baby's actions from your list. If you have been shaking the toy, then how about banging it on the table instead? Or if you are banging it already, how about tapping it with a spoon? Once you demonstrate the variation, give the baby the materials and see if the baby copies you. If not, show the baby the new action again. If he or she is interested but didn't copy, then help the baby do it. Once he or she does it, respond happily and imitate. If the baby doesn't imitate but seems interested, go ahead and repeat this whole sequence again, first showing, and then helping. If the baby clearly goes back to the first action, go ahead and follow the baby for a couple of rounds, and then try to introduce a different action again. Helping the baby learn to imitate another action as well as the first is a big and important step.

Add another object

This is another way of varying the first set of imitations. However, instead of changing the action, as we just discussed above, in this approach you change the materials instead of the action. After you have imitated the baby's exact actions a few times, change or add to the objects. If the baby is

banging a spoon on the high chair tray, you might now bang with two spoons, and then offer both to the baby to bang. Or you might bang with a breadstick rather than a spoon. If the baby is shaking a stick, you might now shake a rattle or a maraca instead of a stick. Do it in the same way we described above, first imitating exactly a few rounds with sound effects and enjoyment, and then, in your next turn, imitate with the new materials. Assuming the baby is watching you, show the baby the action and then offer the new materials and encourage the baby to copy you. If he or she does not, help him or her copy it. Then take another turn. Try this a couple more times. If the baby is interested and trying, terrific! If the baby is not very interested or is losing interest, then go back to the first object. You showed the baby something new, and the baby watched you and had a chance to try it – it was a great learning opportunity!

As a last resort - remove the object

Most often, the play variations we just described will help the baby shift to a new action. However, sometimes babies are so interested in an object or an action that there is just no way to get them to vary their play. We don't want to imitate repetitive behavior endlessly. If the baby does not expand his or her play by following you into the new actions or the new objects, and if the baby is determined to continue the repetitive play after a few rounds of imitation, you can distract the baby with a different object, or physically move yourself and the baby to

play somewhere else. A change of environments brings with it different options, different materials, and different play ideas. Going outside, going to the sink to play with the water, or going to the physical play structures available (baby slide, trampoline, big ball, etc) may be attractive to baby and allow for a new set of learning opportunities.

Why do we value varied play so much? Because play, especially play with objects AND a play partner, is such a rich source of learning opportunities, for language skills, for physical skills, for social skills, and for thinking skills, for young children. Spending lots of time alone in one activity, whether it's a YouTube video, a sensory toy, or an electronic toy, limits the number of new learning opportunities a young child has. We know from early childhood studies that limited experiences in infancy and early childhood can delay development in a number of areas, and such delays can affect children for a long time. Varied play with people and objects is a very rich source of learning from infancy on.

Repetitive body movements

We were just talking about managing repetitive actions on objects. But what about repetitive body actions, like hand flapping, body rocking, or wrist movements? Just as with repetitive actions on objects, all babies use repetitive motor movements as a way of learning about how to control their bodies. However, if

the baby seems so focused on the repetitive movements that it's hard to engage the baby socially, then we want to help the baby be more flexible in his or her attention and actions. Unlike the play ideas involving objects that we discussed in the last section, we don't usually imitate repetitive body movements unless we can incorporate them into a conventional song or social game. Our goal is to expand these movements into more meaningful actions. Here are some play techniques to try:

Add meaning by building it into a social routine

Some actions, like hand waving or finger wiggling can be woven into a bye bye routine or song: think "Thumbkin" and "Itsy Bitsy Spider". If that is the case, then you would imitate the gesture while adding the words from the beginning of the song or rhyme. Once you sing a few bars while adding the movements to the song, then pause and wait for the baby to repeat the movement, after which you repeat the movement and continue the song. You are creating a new social routine incorporating the baby's movements, which will become a song with gestures. Keep it simple, with just the main gesture, but as this becomes a familiar routine over time, you can add one more gesture and another song line, bit by bit, helping the baby imitate the new gesture as well.

Similarly, a movement like head shaking can become "no no" by adding the words and the imitation. A head shake to mean "no" is a meaningful gesture. So if the baby has this movement as a repetitive action, you can try to model it and elicit it when the baby is refusing something he or she

doesn't like, like strained peas. If the baby acts negatively towards something you offer, by turning away, fussing, or making an unhappy face, model the head shake while you say something like "Molly says "No, no peas!". The baby may imitate you and shake his or her head, too.

Offer a different activity

Sometimes the baby uses repetitive behaviors as a filler, because he or she hasn't come up with anything else to do yet. Offer a book or a toy, a tickle or song. The activity you offer may be much more interesting to the baby, and if the baby indicates his or her interest in your offer, then the new activity will naturally replace the repetitive movement with a more flexible, goal-directed behavior.

Add an object

Some repetitive hand gestures can be elaborated into meaningful actions on objects. Hand shaking or flapping can easily become maraca shaking or pom pom shaking. Rocking can become activating a rocking chair, or a rocking horse, or a game on your knee, all appropriate activities.

Change positions

Some repetitive behaviors occur mostly in one physical position. Changing the baby's position will often change the behavior. If the baby likes to lie on her back and rock her head from side to side, you can move her into a seated position against the couch to play with you. Or

put her on all fours and then start crawling towards her to play a little game. If the baby rocks her head in the high chair and it is hard to change this pattern, try a chair with a lower back, so there is no surface there to rock against, or a cushion behind her, to seat her farther forward.

For toe walking, flex those joints!

Keeping the feet flexed while standing and walking helps babies develop agile walking and running patterns and other gross motor skills. Some toddlers shift into walking on their tiptoes, which is a less stable and fluid walking pattern. You can help toddlers regain a more stable, flat-footed position easily by standing behind the child and offering a swinging game by putting your hands under the baby's thighs and your arms holding the child securely and picking the baby up in a seated position for a swing or two or three between your legs, then putting the baby back down while still nicely flexed in seated position in your arms. Keeping something on children's feet, shoes or slippers, also gives children some protection from various surfaces, which they may find unpleasant, and which can lead to walking on tiptoes to reduce contact with the surface.

Try some touch

Some young children have repetitive movements of their hands, fingers, heads, and bodies that concern their parents because the child seems unable to stop or to engage with anyone else or anything else. We have found that some children will re-orient to the people and objects around them after they are touched with

pleasant, gentle pressure, like putting your hand on their shoulder or back, providing a gentle back rub or head rub, or stroking their hand or playing the twiddling fingers may change the pattern of their movements. Putting a hand on a shoulder will often stop repetitive hand movements and sometimes toe walking as well. As you do this, then follow through with an object or activity.

Repetitive vocalizations

Just like repetitive movements, babies make repetitive noises to master their ability to create new sounds. It is a normal and important part of development that prepares a baby for speech. Usually, babies who are 6-12 months old repeat sounds that are speech-like, using consonants and vowels that the baby hears in the everyday speech that surrounds them.

Hearing babies practice their sounds is reassuring because it means they are on their way to speech. Just like with their motor movements, they tend to repeat the sounds that are the newest ones they have learned. We can help babies practice sounds and get ready for speech and conversation with the following parent games.

Imitate and create a little “conversation”

In the preceding section we suggested imitating repetitive actions in meaningful ways with toys to create parallel play. In the same way, we can imitate the baby’s vocalizations during pauses and trying to get a little back and forth turntaking going with the baby. This is very helpful for the baby because it

helps him or her get more and more control over his or her voice. To do this, face the baby in a comfortably close distance and imitate the baby’s sound after the baby makes it (during the pause; don’t “talk” while the baby is talking), then wait for the baby’s turn. If the baby imitates you, repeat the sounds and keep the turn taking rounds going until it feels like it’s time to change. You are creating “baby conversations” in these back and forth exchanges. If the baby doesn’t imitate you, then make the sound again, looking expectantly at the baby and waiting. You might try this two or three times, but if the baby does not imitate you, don’t worry – the sound may be too new for the baby to be able to repeat it. Just keep using this approach of imitating baby’s sounds back to baby and when the baby can, he or she will imitate you.

Imitate and vary

If you have the imitations going back and forth a few times and it seems like it’s time to change, then model another sound that the baby can already make, wait for the baby to imitate, and try a few rounds with the new sound. As above, give the baby several chances to try this, making sure you are close in so the baby can see your mouth and eyes, waiting expectantly after your models, and giving the baby several chances to imitate you. Now it’s a new “conversation”. It is really important to model sounds you know the baby can easily make. Imitating a brand new sound is too hard for a 6-12 month old. That is a skill that toddlers develop much later.

Use physical prompts to change the sound

Another way of varying the baby's sounds and creating a new game with sounds is to add some physical games while the baby is vocalizing. This can work nicely when the baby is coo-ing or playing with vowel sounds, during which you gently pat their mouth as they vocalize (making a wha wha wha sound) or pushing gently in and out repeatedly on their belly, just above their bellybutton, as they vocalize, to make another interesting sound effect ("ah ah ah ah ah"), or even push their bottom lip up to the top lip to make a "ba ba ba" sound. You can also imitate them during the pause and create another back and forth game.

Summary

We have been discussing ways to vary infants' repetitive behaviors that concern parents by imitating them and putting the movements inside social games and by varying actions and materials. Our goal is to support the baby's development of a wide range of skills, sounds, and actions. While repetitive play is a typical way for babies to master new skills, too much repetition of skills that are easy for the baby and that have been going on for a long time might be getting in the way of learning new actions and sounds, and sometimes the baby may be so focused on these repetitive actions that he or she has trouble interacting with

others. So, the ideas offered involve adding a social game component, focusing on the back and forth imitation routines between parent and baby, and helping the baby vary actions and sounds. Creating the back and forth pattern is a "baby conversation", of sounds or of actions, and it helps set the stage for all kinds of great social learning.

Here is an exercise for you:

Pay attention to your baby's green or yellow (caution) light as you imitate and add other movements, body actions, or gesture for your baby to do. Use the Notes page to jot down how your baby responds.

Here is an exercise for you:

This week, use the Notes form on page 63 to jot down your baby's green or yellow (caution) light as you imitate and add other objects to your baby's play.

Green light: smiles or interest expression, or leaning towards you, or active body, or happy noises, or reaches - Go ahead!

Yellow light: serious face, stilling, quieting, looking away, leaning away, blinks, freezes. Try it more again slowly, more quietly, more gently – test it another time or two. No green light? Stop.

Talking bodies

While most of us tend to think about baby's speech when we think about communication, there is much more to communication than speech. In this chapter we will focus on the preverbal communication skills that lay the groundwork for the development of language: gaze patterns, gestures, and body actions that communicate meaning and share attention between baby and parent.



Tuning into gestures

- REFRIGERATOR LIST: INCREASING YOUR AWARENESS OF BABY'S COMMUNICATIVE ACTIONS

- Is baby trying to tell you something?
- What is baby's body "saying" to you?
- Put it into words for baby!
- Look for joint attention acts— those special triangles of communication.

We will cover four main topics: nonverbal communication, intentional communication, joint attention, and ways that parents can help their baby increase intentional pre-verbal communications.

Preverbal communication: “talking bodies”

In typical development, infants and toddlers develop a variety of ways to communicate before they begin to speak. They use “preverbal communication”, which includes eye contact, facial expressions, gestures, and body postures to get their message across, and they become very skilled communicators using preverbal communication before speech develops. Most language researchers think that preverbal communication is extremely important for language development. Speech becomes an additional communication system, built on top of an already very functional nonverbal communication system involving gestures and other nonverbal communication acts. Not only is nonverbal communication critical for language development, but it is a way that people of all ages communicate throughout their lives. Nonverbal communications, or body language, accompanies speech and adds additional meanings, including emotional meanings, to a communication. Babies learn to use their body and facial movements, sounds and gestures to send messages to others, and then as words develop they are added to these existing nonverbal communication patterns.

There are two aspects to communication: expressing oneself and understanding one's partner. This is as true for nonverbal communication as it is for verbal communication. People,

from infants to adults, use their bodies as an expressive system – to convey their internal meanings and states to others. People, from infants to adults, also read and interpret the messages sent by their partner’s nonverbal communications, reading their “talking bodies”. This means interpreting the partner’s meaning – the partner’s thoughts, through their nonverbal cues. Reading cues means reading minds! We will focus on ways of supporting development in these areas in this chapter.

Intentional communication and joint attention

There is a time in early infancy in which babies do not yet know that they can send a message to another person. They may fuss, cry, squirm, bat things away, and make facial expressions that their parents interpret as meaningful, but the baby has not made a plan to send a message; baby is reacting, and all the work for communication is happening on the parent’s end. But babies in the 9-12 month period begin to understand that they can choose to communicate, that they can intend to send a message to another. The baby may show his or intention to communicate by directing the communication to the parent’s face and body. We may see the baby (1) develop a goal, then (2) turn to the parent and communicate their desire or interest or pleasure or need for help through voice, gesture, and/or gaze, and then (3) turn back to the goal. These 3-step attention shifts are examples of **joint attention**, the important landmark in the baby’s development of intentional communication that we introduced in Chapter 6. Pay attention to these! Joint attention involves sharing a

communication **with** a partner **about** an event or object. Thus, they involve gaze shifts, from event to partner and often back again, and they often involve gestures and/or sounds. Babies use joint attention to communicate and share their interests, to make requests, and to share their emotions. They may show joint attention using an action as simple as a gaze, or as complex as pointing, showing, or giving objects.

Thus far, we have been discussing the use of the body to communicate, which develops before babies begin to use words to communicate. We have also talked about the idea of intentional communication, in which the baby is choosing to send a message – that it is purposeful, goal-directed, and not accidental, and how you can tell. And finally we talked about **joint attention**, a very important type of intentional nonverbal communication that allows the baby to share with you his or her desires, feelings, or interests about objects and events.

Once parents know what babies are trying to communicate nonverbally, they can provide the language for those meanings, which helps the baby develop speech. Next we will talk about ways of fostering your baby’s nonverbal communication, but for now, take some time to see and appreciate your baby’s nonverbal communications. Observe your baby’s nonverbal communications, and your own with your baby. Consider whether the baby is intending to communicate - by directing communication cues directly to you, and be sure to put words to baby’s communications. Look for examples of joint attention – 3-part gaze shifts, points, gaze shifts to her eyes to share emotion, giving, showing, and

other communicative gestures. You might enjoy making a list of the nonverbal communications that you see your baby using and the ones that you are using as well.

Here is an exercise for you:

This week, notice how your baby forms his messages to you: gaze, sounds, gestures, facial expressions, other movements and body postures. You can use the Notes form at the end of the document to jot down the talking body moves and messages that baby has sent you this week.

Building more gestures (for 10-12 month olds)

REFRIGERATOR LIST

Do less so they'll do more!

In the middle of play routines, pause and wait---- for a gesture, eye contact, or a vocalization.

Add your gestures to mark actions during play.

Emphasis facial actions that are part of the play.

Sometimes offer objects just beyond baby's reach; baby may look at you and reach to "ask" for it.

Babies use their eyes and bodies to send messages to people—to begin or continue social interactions, to request or refuse food, objects, and games, to say “help me”, or to express an emotion like “I’m tired”, or “I don’t think I like that”. We want to help the baby to develop a “talking body” to communicate by creating opportunities for them to do more with their body so that they can be active participants in conveying their thoughts and feelings instead of relying on you to figure out what they might be thinking or feeling . Examples may include offering our arms but waiting to pick up a baby until the baby looks towards us and raises his arms, filling a bottle and offering it but waiting to hand it over until the baby looks or reaches or vocalizes, waiting to repeat the beloved airplane game a third time until the baby communicates through eyes, voice, and or body that he wants it again. Waiting for baby to use these little opportunities to communicate involve small changes on the parent’s part but they can have big effects on baby’s learning and behavior over the days and weeks, not only during play routines but also during daily living routines involving meals, dressing, bathing, and changing. For babies who are not sending many messages even though they are in the 8-12 month age range, we want to find many opportunities daily for babies to communicate through their own intentional actions, and we can many, many opportunities for them to do so within everyday life.

For these older infants who are not yet using their bodies to communicate much, parents can foster this ability. We can help them develop “talking bodies” by doing less, and giving them a chance to do more. Doing less as parents often means

acting as if we do not know what the toddler wants, holding up items rather than having it within reach of the toddler, offering more than one choice, or offering things the toddler may not want. It means we need to wait for a cue: for a gesture, for eye contact, or for a vocalization. Initially, we want infants to use eye contact, a gesture, or a vocalization to express their intentions and meanings. Once they have learned to use each of these behaviors separately, we will support them to combine two or three of these behaviors together in their requests, which is the way older preverbal infants communicate with others, to be sure their partner gets the message.

We help infants to develop a talking body to communicate their needs and wants by creating opportunities for them to do more with their body, to be active participants instead of passive observers. We may hold back a little from giving things to the child – not ignoring the child’s needs, but rather giving them the space to produce an action to receive the item so that the child begins to understand the connection and communicative power between generating communications (via the body) and receiving what they want. Other examples may include offering our arms but waiting to pick up a child until the child looks and raises his arms, filling the bottle and offering it but waiting to hand over a bottle until baby looks and vocalizes, or keeping preferred toys in a visible but locked container so that even if the child has access, he cannot open the container without bringing it to you. These are small changes that can have big effects over your toddler’s day and week, not only during play routines but also during daily

living routines involving meals, dressing, bathing, and changing. By doing so, you are providing many more opportunities for your baby to learn to use his or her body to communicate, and to learn what communication is all about.

Understanding other people’s gestures

Young infants do not yet know the meaning of other people’s nonverbal communications. Generally, infants in the 6-12 month period are learning the many meanings associated with parents’ gestures, body postures, facial expressions, and words: the “give me” gesture of an open hand, or the meaning of a point when you want an infant to look or reach for an object in a certain location, the significance of a frightened or joyous facial expression. We can help older infants learn these meanings by being more conscious about our own body language. In joint activities with objects, parents can highlight gestures in the routines, asking toddlers to give or pick up pieces, to set up or clean up an activity, or to take the next turn. We can also add steps and sequences to activities with objects involving gestures and facial expression – building a tower and then using a gesture to signal time to knock it down, or using a puzzle and pointing to the holes for each of the pieces. In social games, we highlight facial expressions and body movements to cue the games. Exaggerating affect and gestures or postures mark sensory social routines, and these become “labels” for the toddler when you offer a game. Playing these games in a rather ritualized way helps older infants learn to associate the gestures and expressions with the

games, and begin to focus more and more on adult faces, gestures, and bodies.

Here is an exercise for you:

Go back to your list where you noted the communicative messages your baby sends to you with his or her talking bodies. Now let's help your baby do more with eyes and bodies to send you messages. Think about the moments where your baby can cue you with a look, a gesture, a sound, or movement. Maybe it's to start a game, to sing the next verse of a song, to choose a toy, to want more food, to be done with something. Use the Notes form to jot down these talking body moments you create and how your baby responds.

Directing and combining

Babies communicate in so many different ways, and they tell us so much about themselves – their feelings, their desires, their moods, using their faces, voices, and bodies, long before they can talk. In this chapter we will be discussing how to help your baby use multiple cues to send you a clear preverbal message.



Focusing on directed communications

REFRIGERATOR LIST

1. use strategies to increase baby's use of communicative bundles: voice and gesture combined with gaze in directed communications.
2. foster more complex communicative bundles.
3. maximize the efficacy of communicative bundles.
4. use wait time skillfully to foster more complex preverbal communications.

By the time most babies are 9-12 months old, they send messages with their faces, eyes, voices, and bodies, and they get very good putting all of these together to send a message. The toddler who wants to be picked up while you are talking on the phone may well be pulling at your leg, looking up at you, whining, and scowling, until the moment you lift him off the ground. That “bundle” of communicative behaviors delivers a very clear message about what the baby wants. The baby who is happily playing on the floor with dad throwing a nerf ball around communicates her desire that daddy throws the ball to her with eye contact, smiles, reaches, and happy noises, and when she gets it, she uses her gaze and smile to send a message of pleasure and delight, and a happy laugh, to his eyes. Here is a happy bundle of communication – satisfaction, joy, success, and pleasure all wrapped together through a combination of behaviors and sent to dad.

Some babies tend to use only one communication route at a time, rather than the bundled communications we are discussing. They may want something, and may whine or vocalize, so we know something is not right for them. But if there is no bodily orientation towards us, no gesture, no body language, it is very hard to know what the baby wants. The same is true for facial expression. The baby's facial expression may be saying something, but if there is no eye contact or no gesture or sounds, and no orientation to another person, who can know what the baby is feeling?

Directed communications

People direct their communications to their partner through body positioning (facing their partner with their body and face). They also direct them through gestures aimed at the partner, and by being close to the partner. This is what tells a social partner that a communication is happening! For babies who do not clearly direct their communications, we want to set up the “social space” so that it’s easier for the baby to make eye contact and send a message. Positioning ourselves in front of the baby and getting down low and closer to their eye level (while staying in their comfort zone) makes it easier for us to “catch” those communications and be able to respond to them. The more positive responses we can make to their directed communications, the more frequently we should see them.

Pay attention to how the baby directs communications. If they are not directing them to you, then do something to get the communication directed. You might try one or more of these: (1) Get closer, (2) hold out the desired object but don’t give it over, (3) bring the desired object towards your face, (4) pause in between a song verse or physical game (tickle, patty-cake) to see if your baby will cue you to continue the routine. Sometimes, if you are near, waiting for the child to communicate again in a more directed way will cause some frustration for the baby and make her work a little harder to send the message, with a clearer, directed communication on her next, successful try. We want to provide motivation for children to communicate but we don’t want to cause stress or distress.

Here is an exercise for you:

Use the Notes form on page 63 to jot down how your baby tells you what he or she wants and doesn't want. What about when your baby needs help or is unsure of something? How does he or she tell you? See if you are getting clear and directed communication from your baby or if you're doing all the work to interpret and respond to his or her unclear reactions.

Building Communication Bundles

REFRIGERATOR LIST

1. Seek directed communications.
2. Recognize and prioritize bundled communications.
3. Empower bundled communications.
4. Wait before you prompt for a more complex communication.

This kind of approach- determining what the baby can do, and what we want to support the baby to learn next, and then helping the baby learn it- is how we can help the baby learn to bundle or combine behaviors to strengthen his or her messages. If the baby is a vocalizer, we can start to set up the situation so that the baby also needs to reach for what she wants in order to accomplish her goal. Let's say your baby loves to be tickled and indicates his enjoyment by laughing and making "aah" sounds. The first step towards teaching your baby to bundle his communication would be to hold back from responding to his single communication (in this example, his voice) until he adds a second behavior, such as voice and gesture. You would teach this response by holding out your hands, wiggling your fingers, and asking your baby, "tickle?" The key is to entice your baby with the anticipation of what's to come but holding back from responding until he makes a little more effort and expands his communication. Your baby might respond by laughing and leaning his body forward, reaching out or touching your hands, all of which would be a typical bundle of communication acts telling you, "please tickle me!" This game of holding out hands and waiting for your baby to bundle or add gestures to his voice before tickling continues a few more exchanges, until he easily produces this new communicative bundle.

You can use the same approach to get brief eye contact into the communication bundle once you have determined that eye contact is not aversive to the child. You will begin to prompt your toddler to add eye contact to his or her gesture or vocalization - whatever single communication has been

offered - by catching their attention, calling their name, trying a touch, offering the object, or doing whatever else works to get gaze. Going back to the example of the tickle game, you could hold your hands up to your face, call your baby's name, and exaggerate the inflection of your voice "I'mmmm gooing to get you!", all the time waiting for your baby to look at you briefly before continuing the game. Eventually, our goal is that the baby is able to communicate with gaze AND gesture AND voice all together during social games, toy play, feeding, bathtimes, and other routines. But we will target one step at a time – developing each one separately (other chapters discuss how to do this), and then working to get combinations of two behaviors, and then combinations of three.

Our focus in this section is on baby communications that coordinate voice, brief gaze, and gesture. These are the top priority communications. For a baby who doesn't yet coordinate these very often, you want to be sure to let baby know that a coordinated communication is really important, really powerful, and has a really high payoff. How do you let the baby know that? You pay top price! With your attention, your responsiveness, your follow through. For a baby who is just learning to coordinate gaze and voice, do your best to respond quickly, the first time, to what the baby is telling you in the communication. Babies need to experience again and again how powerful, how effective, a coordinated communication can be at getting their message across. Your attention, responsiveness, and follow through is the currency of communication.

Waiting for more

Once the baby is producing coordinated communications frequently and easily, you might decide to hold back a little responding to a communicative gesture that is not coordinated with eye contact or a vocal sound. Sometimes, if the baby vocalizes without looking, and you don't respond, the baby will vocalize again, this time with gaze, to see why you are not "listening". Now is your chance to attend and respond quickly. We don't expect babies to bundle their communications or gaze every single time, but we do want them to bundle the majority of their communications because of the clarity of the message they are sending. You can help baby by being thoughtful about what kinds of communications you are responding to. Supporting bundled communications (once the baby can easily bundle them) more strongly than single communications helps baby learn that bundled communications are a more effective way to get messages across. There is a technical term for manipulating the "reward" that the baby receives— differential reinforcement. It means that you are rewarding the learning target – bundled communications – more strongly than single communication. It is a powerful teaching tool over time.

You can teach babies to bundle their communications inside object play and during face-to-face social games including songs (e.g., "itsy bitsy spider" "twinkle twinkle") and physical games ("I'm going to get you" "who's so big" airplane, peek-a-boo). Part of this process involves setting up the game and then waiting for a cue or a communicative behavior from your

baby to continue the game. Sometimes the cue might be a single behavior- eye contact, an outreached hand, or a vocalization- and that's fine because it gives your baby a starting place to communicate his or her desires or feelings about the activity. An outstretched hand tells you, "Yes, I want that block"; looking at your face when you stop singing might mean, "Why did you stop singing? Keep going!". A bouncing baby when playing horsey stops may mean, "Bounce me again". Recognizing and rewarding babies' efforts at communication by following their request teaches your baby that each of these ways of communicating is powerful and sends a message- a message that we hear loud and clear and respond to by giving the object, singing the song, or continuing the game. Other times, you want to encourage a little more response from the baby- looking at your face while reaching for the object, making a sound and looking up at you when the song stops, or bouncing her body and making a raspberry sound to imitate a horse sound. Modeling different combinations of actions for your baby throughout the activity will teach your baby different communicative messages to send you when you pause and wait for a response.

For example, imagine you're singing "Twinkle, twinkle little star", while adding gestures to each verse: "Twinkle, twinkle little star", (opening and closing hands), "how I wonder where you are" (shrugging shoulders and hands; clapping hands; or patting legs (depending on your child's motor level). "Up above the world so high", (raising hands up in the air), "like a diamond in the sky", (joining first and thumb fingers on each hand to make a diamond and holding out in front of your

chest), "Twinkle, twinkle little star" (opening and closing hands), "how I wonder where you are" (shrugging shoulders and hands; clapping hands; or patting legs; use same action from earlier verse).

You could begin the activity by singing the song to your toddler in its entirety with gestures 1-2 times and then on the third try, assuming you are getting reactions of interest and enjoyment, start pausing momentarily at the start of each verse for your toddler to cue you to continue with either a single behavior (especially if it's a new, unfamiliar routine) or a bundled communication. To encourage your toddler to communicate during the pauses, slow down the singing. Exaggerate each gesture at the start of the verse and then pause at the end of each phrase to see if your toddler will imitate the gesture or make a sound or action. If not, you might take your toddler's hands to help him/her make one motion after you while you sing the song. Or you might not. Many toddlers resist having their hands manipulated. Be sure to show your delight in the motion your toddler made!

Think about your body positioning as you start this activity. Sit in front of your toddler and be close enough to touch your child, but keep your hands in front of your body, chest height or higher, to make it easy for your toddler to shift gaze between your hand movements and your face. Continue to practice the routine so that your toddler understands the different movements or actions associated with the game and can learn

to imitate and produce combined behaviors to participate and continue the activity.

An example of modeling and waiting for combined behaviors in an object routine might occur when stacking blocks with your baby. The game consists of stacking blocks one-by-one until the tower is too tall and falls over. Adding sound effects and pausing in between actions can help signal your baby that it's his or her turn to send a message back to you.

You might make silly sounds (e.g., rocket ship, helicopter, train) while holding the block between you and the child at eye level before slowly and dramatically placing the block on the tower. (1) The silly sound should create interest in your child and (2) holding the block between the two of you gives your child a chance to coordinate gaze and follow the block. Your child will look at the source of the sound- and it's you!

When your child looks at you while making the sound, you can offer the block so that your child can practice using a bundled behavior-reaching for an object with eye contact. Continue the game, using the sound each time. Your child might imitate it back he or she places the block – nice vocal imitation. You can add other sounds to when the tower is about to fall or be knocked down in a similar teaching format: (1) showing your baby the different actions of an activity, and (2) pausing and waiting for a cue from your child to continue the game.

Summary

Communications can't be successful unless the receiver gets the message the sender is trying to deliver. Senders need to direct their messages to their recipients. Especially with preverbal communication, babies need to let their partners know that they are trying to send a message.

Bundled communications tell the receiver what the baby is trying to communicate. Some babies figure this out on their own and others need a little more help. You can help your baby send clearer messages by helping them look to their partner and combine their voice with their body or hand gestures to communicate their desires, feelings, and interests. By thinking about your own reactions, you can use your responses to the baby to foster clearer, more complex, bundled communications, by prompting the baby to add communications, by waiting for a clearer communication, and by being choosy about what you are responding to.

Here is an exercise for you:

This week, pay special attention to your baby's intentional communication bundles. Pick one activity each day (see the Activity list in Chapter 2) to record on your phone, and at the end of the day watch a few minutes of that activity and identify your child's communication acts. Record different activities in different days so you can determine which of your daily activities are the richest for child communication and which ones need a little tune-up in the child communication dept.!

We've come to the end of the Parent Manual, and we hope that the ideas you have tried over the weeks you have been using it have had positive effects for you and your baby. We wish you and your family the best.

Sincerely,

Sally Rogers and Laurie Vismara

Note taker

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?

Date: _____

Activity: _____

Toy Play _____ Social Play _____ Outdoor Play _____

Feeding _____ Bathtime _____ Changing/dressing _____ Books _____

What did you notice?
