The Body and the Mind of the Preschool-Age Child

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In this chapter, we attempt to give a brief description of the mind, the body, and the embodied mind of the preschool-age child, boy and girl. We focus on the main developmental issues that a child of this age deals with and then we address some of the issues that may be salient in dealing with the family: father, mother, other caregivers, as well as siblings.

Many children all over the globe at this age "enter the world" outside the family, i.e., in the preschool setting or a childcare center. We focus on how these issues may interact with children's fantasies and theories about themselves, their families and also of their bodies, and the impact of some negative experiences at this age, such as illnesses.

Selma Fraiberg (1996), a pioneer in the study of young children's emotional life, described this age as "the magic years" in the sense that most children of this age live in a space between fantasy and reality, and they can imagine vividly, believe they might have magical powers, have fairies visit them, and to be a prince or a princess, among many others.

Anna Freud (1952) used a very apt metaphor to describe the preschool-age child, being "like an opera character," i.e., a person who lives intense dramas, traverses difficult obstacles, faces unknown or scary situations, and has very intense emotions: love, tenderness, empathy but also jealousy, rage, fear, which are indeed very vivid and which at times are difficult for the adult to understand. The preschool child exhibits "animistic thinking" which generally means that inanimate objects, plants, and animals can be invested with human-like qualities such as intentionality and a mind of their own. Children may imagine that their toys have feelings. For example, a child might not want to leave their doll behind if going somewhere, for fear it might get lonely and cry when without them. This is particularly true at the beginning of the preschool years (Galyer and Evans, 2001). Therefore, things that for adults may be inconsequential, such as a teddy bear or a doll, for a young child may be protectors or scary objects, depending on the child's imagination and memories.

There has been considerable interest in the question of amnesia of early childhood (Hayne & Jack, 2011), as many adults do not remember much before the third year of life. This seems particularly true when there have been difficult experiences. Many adults find it very hard to see the world from the point of view of a very small child. For a child of this age, the world may seem like "a world of giants" with furniture mostly

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designed for adults, for example. When an adult stands in front of a small child, the adult indeed may seem like a giant. If an adult yells or makes an angry face, this may be very scary for the child.

Even though theoretically, it is easy to understand that a preschool-age child thinks differently, this discovery has not been an easy achievement. Only a few decades ago, Jean Piaget described how a preschool-age child thinks and the differences with later stages. He described the patterns of thought of a preschooler with the name of preoperational stage. During this phase, a child's experience is almost totally subjective, dominated by the child's visual cues and perceptions and by strong emotions. For example, a preschooler playing hide and seek, may cover their eyes, or hide in plain sight reasoning that if they can't see the other person, the other person can't see them either. Later on in this stage, the child can start seeing the perspective of others.

Anna Freud and Dorothy Burlingham (Burlingham and Freud, 1942), through their work on the London Hampstead nurseries after World War II, described the anxieties and fears a child may have when they have been separated from parents and discussed in some detail the bodily responses to stress, tension, and happiness. The careful observation of children under stress showed the suffering a young child experiences when there are major separations or losses. These can show in withdrawal, temper outbursts, and self-stimulation such as pinching the skin, hitting the head, oscillatory body movements, sucking the thumb, and many others.

Since then, much has been written about the attachment needs of the young child and their emotional life. Alicia Lieberman (2017) wrote the important work *The Emotional Life of the Toddler*, which has been later supplemented with other work on the effects of trauma on young children. She and her colleagues have noted the vulnerabilities and emotional impact that negative experiences can have on the emotional development of a child. Those descriptions have been furthered by other researchers, who have studied dissociative phenomena in preschool children (Carlson et al., 2009) in response to difficult circumstances. Dissociation in the preschool years is often overlooked by adults, and can show as sudden changes in behavior, assuming a different voice, acting as though one were an animal, etc. When these experiences assume a life of their own, so to speak, they are pathological dissociation.

Everyone is aware that young children throw temper tantrums and may struggle to manage anger and aggression. However, sadness and anxiety are less often recognized as a problem, even though they take a toll on the development of the child and might be addressed then. The child may not know how to speak of these emotions, particularly if nobody asks him or her about their feelings.

The Body of the Preschool-Age Child

When a pediatrician or a mental health clinician thinks of a preschooler, roughly a child between the ages of 3 and 6, what should come to mind is a small person who has a zest for life, whose eyes shine in response to new experiences, and who is eager to explore the world around him or her. The boy or girl will want to find new things, play, is curious, and wants to learn naturally. Maria Montessori (2004; Montessori et al., 2014) developed her pedagogic methods suggesting to take advantage of the natural tendency of the child to learn by experimenting or "learn by doing" (Gehard, 2020, Needham & Libertus, 2011; Thelen, 2000).

The preschooler grows physically at a steady pace. There is a noticeable change in the physique as the child grows taller, the child at this stage is also more aware of their greater motor coordination and skills. He or she is observed to explore the spaces around them by running, climbing, hopping, jumping, etc. with increased gross motor skills.

As the boy or girl gains more confidence in body strength and coordination, he or she takes pleasure in this newfound awareness, ventures

out to explore, play, and asks many questions about the world and those around him or her.

The body of the young child is of course small, and when he or she goes out of the house, the world offers many opportunities to learn new things and to "take them in." If one thinks, for example, of a visit to the zoo with a preschooler, most parents delight in pointing out to the child a zebra or a chimpanzee, and the child is absolutely fascinated, if perhaps also a little scared by some of the huge animals.

The young child in a clinician's office should appear in principle, confident as long as his or her mother, father, or other caregivers are around. The child refers to them and generally wants to share in the joy of any discoveries. Several experiments and observations have demonstrated that the young child seeks the attention of a parent every 2 or 3 min. The child says to the caregiver and other people around "look at me!" and shows that he/she can jump high, is strong, has new shoes, a new dress, etc.

The girl or boy takes joy in climbing obstacles, going up a set of stairs and then going down, etc. It seems this would be a way of practicing and developing new skills. If the teacher, physician, or another clinician does not see this basic energy and happiness, one should wonder what is happening in the emotional life of that child.

One of the developmental processes going on at this age is the synaptic pruning and at the same time myelinization in the brain. In the corpus callosum–fibers that connect the left hemisphere with the right one there is active myelinization and pruning of connections. This link allows communication between the two hemispheres of the brain. Usually, the right hemisphere is specialized in emotional processing and the left one is responsible for language production and comprehension. This is observable in a preschooler with his/her ability to understand the emotional context and nuances of words (Hellige, 2001).

Another main developmental line in early childhood is fine and gross motor development and coordination. The girl or boy will naturally develop more skills if given the opportunity to practice them. The child will develop "handedness" (most often for more dexterity on the right

hand) by the age of 4. This indicates the development of a "specialization" of the brain hemispheres on the (usually) right brain more likely to process emotions and visuomotor abilities, while the left brain favors language and reasoning. A 4-year-old child who still uses both hands might elicit the question of whether the brain is undergoing that specialization. At times, parents think of this as the child being ambidextrous when the problem is very different.

The preschool child is working on gross motor coordination and acquiring fine motor skills that will be used and reinforced in their specific culture. Gross motor skills refer to the capacity to use the whole body or large segments of it for specific purposes. These abilities require much coordination and balance of the body (informed by the vestibular system in the inner ear). The young child will learn to run faster, to climb and descend faster, usually with close supervision from caregivers. The motor functioning often comprehends motor planning and perceptual awareness which is the ability to picture in the mind how to carry out an action. If one wants to descend from a chair, should the child turn his or her body around and descend feet first or try to jump from the chair? If one wants to reach the marmalade jar, how to get to it? Would that require complicated movements, displacement of the whole body, or trying to reach it over the table?

Muscular tone refers to the basic ongoing level of muscle tension in the body. The child should have an adequate tone to maintain the body standing up, sitting up, and supporting certain actions. If the muscular tone is too low, the child will tend to lean on things, "slouch" the body, complain that he or she is tired, and manage to walk only short distances at a time. A high muscular tone is noticed in children who appear somewhat stiff and "very strong," who are forceful and not very elegant in their movements. Some young children struggle to assess their strength and may crash onto or hit another child even when they meant only to touch.

More complicated movements are work in progress, so to say, like the ones required to learn to swim, dance, learn martial arts, or play a musi-

cal instrument. Movements must be performed in a certain sequence. Normally, this sequencing of movements is carried out automatically, once the sequence is learned, and is reaffirmed by practice. Children who appear clumsy struggle to sequence movements.

Many activities in the preschool years involve motor imitation of each other and of parents and teachers who sing songs accompanied by certain motions, which the child is only eager to imitate and master.

It has been proposed that the mirror neurons (present in the prefrontal cortex) are central in the innate tendency to imitate the movements of others. Mirror neurons were described a few decades ago and they seem to be activated when a person views someone else performing a certain action (Gallese et al., 2002; Rizzolatti & Craighero, 2004). Just by the child looking at a certain action, the mirror neurons send messages that activate the corresponding muscles in the brain of the observer as though he or she were performing the same activity.

Stamina is a somewhat vague concept that involves how soon the child will become physically tired from physical activity. Some children appear to have immense amounts of it, while others complain of getting tired after walking half a block and hope to be carried the rest of the way. Most parents intuitively detect challenges or difficulties in motor development and may attempt to reinforce those abilities that are more difficult for a child.

Regarding fine motor skills, this requires the adequate myelinization of nerve pathways, to be able to isolate movements that are increasingly small in range, of the fingers. The development of these skills progresses from the core of the body in a distal direction, i.e., from the center of the body to the periphery (Pauen, 2011). First, the child will learn to control the whole arm, then the hand, and then the fingers. A pincer grasp is generally achieved at 10 months and the child will industriously practice these skills in the first years of life. Before the age of 3, in the Western world, adults introduce pencils and crayons for the child to draw and color, to draw circles (mas-

tered at around age 3), and then figures that require angles (squares and rectangles) which are mastered around age 4 in general (Frisch, 2006).

Along with developing fine motor skills, there is improved hand–eye coordination, observable by the ability of a 4-year-old preschooler to draw a discernible human figure. The child will attempt to draw people which at first (age 3–4) look like "tadpoles" and gradually will introduce more features such as ears, eyebrows, eyelashes, fingers, etc.

All of this requires patience and the chance to practice in a safe environment that encourages this development, in the Vygotskian sense of presenting to the boy or girl challenges in the "zone of proximal development" (Wertsch, 1984), i.e., in skills that they are barely able to master and are the next step.

Manipulating scissors is only practiced if there are scissors available. Holding the pencil with a tripod grasp (three fingers instead of the whole palm of the hand) is more readily acquired if the child has an opportunity to draw and color. The clinician can evaluate the smoothness of movements, their accuracy, and the presence or absence of an intentional tremor (a tremor in the fingers or hands which is more noticeable when the child attempts intentionally to perform a certain movement).

Identifying any problems in motor development is important. First, they are readily misinterpreted by parents and preschool instructors as "laziness" on the part of the child, or not trying hard enough or if the child avoids doing them because the result is unsatisfactory, as a behavioral problem, not cooperating or obstinacy. The child may complain that his or her hand hurts when trying to draw or do other manual activities. An adequate early intervention with occupational therapy assessment can be crucial to detect this, which would lead to interventions while the child is very young.

In most preschools in the world, body motion, bodily actions, postures, and the sequencing of movements are introduced through music and an elementary form of dancing. The songs are accompanied by motions with the whole body

which the child will imitate at first only and then reproduce. This enhances awareness of the body, acquisition of a body schema, sequencing, and practicing imitation.

The Mind of the Preschool-Age Child

An entire book could be devoted to the cognitive and emotional development of a young child. We highlight a few important elements that are not necessarily kept in mind when working with preschool children. The preschooler stage is marked by the transition from toddlerhood, where the child has a mostly egocentric view of the world, to an ability to think of others' minds. As the child enters the preschool age, there is a move away from a self-centered view of the world, toward a view where a child can understand the world exists separate from self. There is a gradual de-centration, and the preschooler is able to grasp that a world exists where other people might see things differently (Davies, 2010).

Developmentally, the myelination and progression of neural networks taking place in the forebrain is observable by the more mature and flexible thinker (Moriguchi & Hiraki, 2009).

More sophisticated cognitions are slowly acquired by the young child, who has been described by various research as a "little psychologist," a little scientist, or a little detective. The child learns new information mostly by doing things and observing what happens around him or her. He or she interacts with the world largely in a physical way, trying to ascertain the properties of things with which he comes into contact, their texture, their physical behavior, their weight, and how they can be manipulated. The child constantly is engaged in experiments with the objects around, to learn their behavior through manipulation and permutations in position, stacking, displacing them, etc. The child's thinking is dominated by what he can see, hear, and touch. Abstract categories are more elusive. If something "looks bigger" then it is bigger. If a line of small objects looks longer than another one with the same number of items, but with the

objects are closer together, the longer one "has more items," despite counting the same number. Piaget (1964) conducted several experiments demonstrating that most preschool children think in this way through various "conservation experiments." The conservation term refers to a number of things, or length, surface, and volume. The principle of conservation will be acquired until the child enters school age, in general around age 7. Therefore, if two blocks of plasticine look identical, and one is rolled into a short cylinder, and the other one into a long cylinder, the child says that the longer one has more plasticine. It is not possible yet to hold two variables in mind, but just the one on which he or she is focusing. Just half a century ago, these issues of development of cognition were not known, and children were often treated often as "small adults."

Something similar applies to causal thinking, which can be described as magical or "superstitious," i.e., the preschool child may think that his or her parents are arguing because he or she is a bad boy or girl. Not picking up one's toys may lead to a negative event happening later on in a temporal and causal relationship that can be named magical thinking or "omnipotence of thought."

The thinking process of a preschool child is dominated by perception and egocentric thinking to a large degree, i.e., the world centered on the child. Emotions also dominate cognition. If a 4-year-old boy feels that it is not fair that an older brother has "more colored pencils" than him, even if the parents count the same number, the child still may be upset because it "feels" as though the older brother has more, better, or more impressive colored pencils. Since emotions are very intense, they are more important than abstract categories like numbers or measurements.

An important developmental gain usually achieved in the preschool age is "theory of mind" or the capacity to theorize or imagine how other people think and feel in a given situation. This is a crucial ability to be able to "read others" and to understand other people's points of view. This is often achieved through reasoning and interacting

with parents and siblings, and through symbolic play.

The central characteristic of the theory of mind is the capacity to "decenter" the mind from one's perspective and realize other people might see things differently. This is often tested with the paradigm of "false belief" (Tompkins et al., 2020). In this, which will not be explained here in detail, the child is shown how someone "could not realize" that something has changed. If the child is only able to see things from his perspective, he does not have yet a "theory of mind" (Frith & Frith, 2005) if he or she is able to see that the other person "thinks" erroneously of something, this shows the theory has been acquired. This is achieved usually around 4 years of age.

Theory of mind is also at the basis of lying and deceiving others, as the child is now able to see that a parent or other caregiver "did not notice," for example, who took a cookie without permission and can be fooled. This is a major developmental acquisition in the capacity to relate to other people.

The child at this age will also be able to acquire "metacognition" or realize that some things are not done in a certain context, while they are acceptable in others. Some rules of behavior are implicit even if not openly stated. By imitating and observing the parent's behavior, one can learn that "one does not hit when one is angry" or that "one cannot speak loudly at church." Of course, the opposite is true. Very often parents unwittingly model behaviors that they find unacceptable. A parent may tell a child "we don't scream" while screaming this admonition to the child. It is implicit, intercorporeal teaching that is a more powerful message than the mere words the parent is uttering, i.e., the parent is teaching by example.

Another aspect of cognition is the achievement of some arithmetical functions. Often these involve counting items, and the achievement of ordinality (the order of numbers) and cardinality (the final count, or the number of items). It also requires generally the motion of "tagging" items (with the aid of touch) in order to count them so that one only counts each item one time and does not skip any items. Longitudinal sense is achieved first and years later the notions of surface area and volume.

The child is aided in counting by mnemonic devices such as songs specific to his or her language (in English "ten little monkeys jumping on the bed" and in Spanish "*yo tenia diez perritos*" or I had ten puppies would be good examples), in which the child counts down with each verse of the song.

The body of the child is also used to count items. If one asks a preschooler how old he or she is, at first it will be conveyed by the number of fingers shown and only later with a numerical concept. The acquisition of the numerical sense and counting requires numerous repetitions, most of the time in the form of play.

Inner Monologue and Language Abilities

Humans developed thousands of codified systems of communication verbally, i.e., spoken languages which the child learns very early on, starting in utero (the rhythm of the langue spoken by the mother and several sounds). Once the child is born, there is an exponential acquisition of words and sets of words to communicate with others. In the infant, there is a predominance of sounds and gestures to communicate needs or emotions. During the preschool age, an added instrument is the spoken language used in the culture in which the child is. This is a gradual communicative process by which the child learns more and more words and phrases, to then combine them to acquire also a "grammatical sense." That will involve syntax (the ordering of words in the corresponding language), semantics (the meaning of different words and phrases), prosody or phonetics (the way the words are pronounced to convey an accurate meaning), and then the pragmatics of that language (the use of tones, pauses, figures of speech to denote questions, denial, sarcasm, irony, etc.). The sheer number of words increases dramatically in the preschool years for children of most cultures. In some cultures, spoken language is very salient, as

in the communication between parents and children in Westernized cultures. Among the aboriginal people in Guatemala, as in many other cultures, it has been shown that the mother speaks little to the child in the first year, and most communication is nonverbal and through touch, gestures, and implicit references. This changes after that and the child will eventually learn many more words. A similar pattern has been observed in some Native American cultures in North America.

Around the age of 2–3, a child roughly has a vocabulary of 1000 words, which increases roughly by 50 words each month. Around age 3, a child's language is quite developed and the child should be "conversational." The boy or girl should be able to answer questions and elicit information verbally. He or she has acquired the ability to question and asks "why" and "what"; the response to these questions by the caregivers helps increase his vocabulary and directly aids in his language development as well as acquisition of knowledge. By age 4, in many cultures, the child's language is complex and grammatically correct most of the time. The child then can speak in longer sentences using past and present tense and connecting words, *like but, if, and, so*, etc., and is able to tell a story using just words, as compared to toddlers who do not possess the vocabulary and use actions to tell a story. A child of 3 will still rely on actions to express him/herself, but by the age of 5, they will be able to use words and their meanings to explain his actions or play. One way to measure the acquisition of language is counting the number of words per utterance by the child. At age 3 or 4 to produce sentences with five or more words signals satisfactory language acquisition.

The next question is what the language is used for and what is the purpose of learning it. This will require that the caregiver speaks to the child to convey meanings, to teach about emotions, about events taking place now ("you are running fast"), and about recent or past events ("yesterday you sang us this song"). It will also require others surrounding the child to register the communications of the young person, their ideas, their impressions, and reports, and mark having received that communication. In previous generations in many cultures, children were taught to "be seen and not heard," but nowadays in many cultures, people are interested in listening to what a young child might say. This process of being talked to, and being listened to, reinforces the acquisition of language and the sense of self as an effective agent.

Eventually, the child will "embody the language" and will acquire what has been called an inner monologue or internal speech. This function has also been called the "dialogical self" (Fogel et al., 2002) or private speech (Kraft & Berk, 1998).

Preschoolers talk to themselves; they say out loud what older children and adults may just think. A child may be heard sometimes repeating instructions from parents, even when the child is by him or herself: "we don't hit" or "don't throw water on the floor" (Knudsen, 2008). This sort of internal language or private speech assists the boy or girl in regulating their behavior and emotions and is a way to direct themselves. For instance, a 4-year-old boy playing by himself with a train track carries out a running commentary about his play that describes the scenes playing out. "The track will go here and then the train will go over it. And then the train will whistle when it is ready to start." Eventually, all these words lead to this inner monologue which is also a way of processing experiences and containing and modulating the expression of emotions. Children with fewer language abilities, who have difficulties negotiating frustrations through language, are more likely to exhibit desperation and aggressive behavior (Clark et al., 2020). Similarly, preschoolers with language delays are more likely to play alone and have more conflicts when playing together with children their age, due to their limited communication skills and diminished ability to understand and be understood by their peers (Fabes et al., 2006).

Language is essentially a social exchange as it is learned from other people (Bloom, 1998). The parent–child dialogue helps shape emotional understanding, development of reality testing, and acquisition of higher and more complex language skills. Parents who talk to their children in

an animated style help them develop storytelling abilities. This is especially important when parents talk to their child about a shared experience, by elaborating on the memory and the details, parents pass on their child the ability to put words to their experience and memory.

Emma a four-year-old girl comes crying to her mother. She cannot go to sleep because she is afraid of the "dark and the big shadow" in her room.

Mother: (while comforting her child), It seems like you got scared by the shadow and thought there was something scary in your room.

Emma: (Nods) Yes.

Parent: When you can't see anything in the dark, it is easy to get scared

Emma: I thought ….there is something in the corner of my room. But it was dark, and I didn't want to look there.

Parent: You must have been afraid!

Emma: (Nods again) Yes, I thought… maybe there was a monster with a very long arm.

Parent: I can imagine that doesn't feel very good. What might help you feel less scared of the dark?

Emma: I don't know mommy… can we go together and look?

Parent: (Nods) Yes.

The child reaches out for her mother's hand looking relieved.

In this conversation, the mother understands her daughter's distress over imagining something scary, instead of telling her "It's okay" and "there is nothing there," the parent listens calmly, empathizes with, and shows compassion. By doing so, the parent is telling her daughter that her emotions and thoughts are important and her mother cares that she is upset. In addition, by exploring the child's fear, the parent supports the child's attempt to resolve her fear.

The Emotions of the Young Child

Many child therapists explain to worried parents that a preschool child has "big feelings" and relatively lesser capacity to control them if they are very intense. A child could become very sad

about things that for adults are relatively less important. The birth of a sibling is a major event in the life of a young child because it almost literally means some sort of betrayal as the mother acquires a new baby, who will unavoidably take a lot of her attention. Much as the young child has been prepared, still it may be hard to control the feelings of jealousy. There will be internal conflict in the older sibling, and at times the child may give way to the expression of anger, much to their regret later. This could take the form of squeezing the baby too hard, pinching after caressing or even biting the baby. One often can see the internal struggle of a preschooler to control these powerful emotions.

The same can be said of fear of separation from parents when the child enters preschool. Adults tend to encourage the child to "be brave" and "not to cry" when they are left by a mother or a father at the preschool. Even when there has been preparation (visits, getting acquainted with the teacher, etc.). The boy or girl may feel scared and very lonely even if peers are friendly and the teacher welcomes the child. One can see the struggle not to cry and to keep the feelings inside, when the child actually feels scared or worried, he or she might fear that the parents may not come back to get him or her after school, might get lost, etc. Very intelligent children at times start worrying about possible scenarios quite early on:

Walter, a four-year-old boy, is the only child yet in the family. His parents are expecting a second child. as the mother is pregnant. Walter is a very intelligent little boy and tries to be very good in every way. His parents ask him to be good. He sometimes cannot go to sleep because he is worried that there might be monsters under the bed or in the closet. His parents are careful not to show him scary movies or cartoons. Still, he worries: "what if the ceiling caves in and falls on top of us and we die?". Walter imagines many other things that could go wrong. His parents are very patient and reassure him, but he imagines negative scenarios. If his mother buys him a toy he asks: "are we going to have enough money for the rent at the end of the month?" as he has heard his parents talk about this, even though they do not have major financial problems. If his father is going to work, and says he might be late, Walter worries a lot that his father might be fired. The parents seek help to find strategies to help Walter not to worry so much.

In the above scenario, we have a very intelligent child, with sensitive parents who are very careful not to scare him and try to be sensitive to his worries (Sroufe et al. 2009). Particularly in clinical settings, one often finds preschool-age children who have seen frightening horror movies, movies about zombies, Dracula, monsters, a doll that comes alive in the night and stabs children, etc. Often a young child says she or he "is not scared of anything" and the parents may allow their child to see them, later the consequences occur in the form of further fears, nightmares, or being intensely afraid of the dark.

Parents often worry about the need to socialize the child and assist him or her to contain intense emotions, be polite, be friendly, and show compassion and empathy for others. This is hard, and many adults are still trying to acquire those skills. For a young child, they may be very difficult things. In many cultures, young children must show respect and love to their elders even if they are scared. For instance, the parents may insist that a 4-year-old kiss grandma when greeting her, even if the child does not want to and is a little afraid of a very old or stern lady. Children may be encouraged to answer questions politely and to speak when spoken to, even if they are shy around strangers. Sometimes parents criticize or even shame the child for not being more outgoing.

One often finds in working with families of young children that parents may have forgotten how it feels to be a small child. They may see the child as naughty, manipulative, vindictive, or lazy. Having a small child show intense emotions may evoke in the parents memories of their past, perhaps fears of their own parents, suffering from punishments, and this may make it difficult for them to have empathy for their child. It is often helpful to encourage parents to see the world from the point of view of their son or daughter and realize how little power a small child has.

The boy or girl will acquire a concept of him or herself as a "good boy" or "good girl" or the opposite. Optimally, the child basks in the admiration of his or her parents through showing accomplishments, abilities, singing, counting, dancing, etc. This is an age in which the child is internalizing (or embodying) the family's values and parents are the source of all wisdom, but also of disapproval and criticism. Lieberman (2017) has emphasized how pervasive the fear of "being bad" is, even in quite young children. At first, there is only the fear of external disapproval or reprimand by parents, but later this is internalized into a form of conscience in which there may be a great fear of being bad or doing the wrong thing. This is further exacerbated if parents scare the child, yell, punish extensively, criticize, or demean by saying "you are being bad." Some children may never quite recuperate as they grow up from this pervasive sense not being good enough.

At first, the moral development of the young child is acquired by prohibitions and being told "no" about certain actions. The child will usually be afraid of breaking norms such as not hitting others, destroying objects, or lying. Internally, there may already be doubts as to one's "goodness." Some young children when asked if they are a good or a bad boy or girl say, good boy or good girl. Others even at age 3 offer a more nuanced perspective "sometimes good and sometimes bad" and others, more tormented, say "I am bad."

On the other hand, empathy seems to be an innate quality in most young children, which appears first in infancy. Studies show that preschool children also show empathy if presented with a situation in which another child is suffering or is being hurt (Paulus et al., 2020). This quality flourishes in some children, particularly if the caregivers show kindness and compassion to their child and toward others, which the son or daughter will see in action. However, some children may be aggressive or nonempathic if they have been mistreated or have intense resentment and anger toward others for the way they are treated.

Temperament

Explaining individual differences between children of the same age or belonging to the same family requires invoking genes, birth order, gen-

der, cultural attributions to boys, girls, firstborn, youngest child, etc. Also, it requires exploring the reactions of the child to the physical qualities of his or her body. Attractive children seem to be treated better in general (Principe & Langlois, 2011), and in a patriarchal world, boys are more encouraged to "keep trying" to solve problems, while girls may not be. Aside from those differences, the concept of temperament refers to a biologically determined tendency, which of course is influenced by interpersonal and social factors. As Chess, Thomas, Rothbart, Kagan, Fox, and many other researchers (Chess & Thomas, 2013; Hertzig, 2012; Fox et al., 2008; Kagan & Snidman, 2009; Rothbart & Derryberry, 2002) have shown, some children are very open to the world, willing to explore, try new things, and embrace novelty. Others are much more cautious and careful before approaching new situations.

Temperament features encompass a normal variation of exploring and responding to the world. The researchers mentioned above have included in temperament, a style of reacting to situations. Some children have intense reactions to small frustrations, and some are very placid. Perhaps these would be two poles, one a "difficult" temperament and the other an easy one.

Most teachers and many parents prefer children with an easy temperament to a child who is more demanding, intense, and very emotional. Another temperamental feature is how quickly one reacts to stimuli and what thoughts are involved (or not) before responding to a dilemma. For instance, there are experiments on the capacity to delay gratification. A child may be told not to eat a piece of candy and wait if he or she can, and if they wait, there will be a greater reward at the end of a few minutes. Some children can defer gratification, and some prefer to act at the moment, sacrificing later gains. Tremblay and his group (Lacourse et al., 2006; Tremblay et al., 2004) in longitudinal studies have shown some characteristics that are risk factors for boys, like being a big child, being very restless, impulsive, and aggressive during preschool age predisposes the child to have more difficulties of an externalizing nature later in life. This is also an opportu-nity for early intervention in children who are most at risk so that these predictions are not fulfilled.

Socialization and Its Vicissitudes

Most young children around the world start the process of interacting with other people outside their nuclear family by interacting with extended family (cousins, aunts, and uncles) and neighbors or in parks. In many Westernized countries in which mothers go to work outside of the house, from infancy, the child may spend many hours of the day in a childcare center. However, in many areas of the globe, children start attending social settings in preschool. Here the boy or girl will be interacting with peers, and with teachers, an authority figure different from the parents or extended family.

In most preschools in the United States, teachers want to impart information of a preacademic nature (letters, numbers, the surrounding environment, weather, etc.) plus starting to expect self-control, management of aggression, and learning to interact kindly with others. In the United States, there is much emphasis on individual self-control and each child accomplishing their own goals with help from the teacher. In Japan, although the academic goals are very similar, there is more emphasis on collaboration between groups or small *troupes* of children. Kindness and politeness are also emphasized, and actively taught by encouraging children to help each other (Burdelski, 2010). If a child is struggling with a concept or task, a peer might be asked to help that child.

Children will learn concepts of discipline and rules and fortunately, most preschools now are moving away from punishments, negative consequences, and emphasize more socioemotional development, rather than a purely behavioristic approach, in which a transgression is followed by a punishment hoping it will make that disappear.

A preschool group is still a collection of small children who may have to learn to share toys, take turns, interact with one another, and manage their frustration, anger, and other emotions.

Several authors have observed the behavior of these children in ethological terms. How much touch and play-fighting occurs in the setting, how do children look up to a "dominant" boy or girl who has a higher standing in the group. Children start developing a concept of who is good at running, drawing, writing, etc. This is an informal hierarchy. Boys may want to "sit next" to the boy with "higher status" and copy his tastes and preferences, gestures, etc. (Martin et al., 2005; Santos et al., 2015). Other children might defer to that child, who may take toys from others without any resistance, etc. Teachers generally are observant to help children manage those interactions, but much goes unnoticed. Some children will have to work on controlling their anger, while others due to a more sensitive nature or temperament may need to be helped to learn to say "no" or to assert their wishes even in the face of a dominant child.

Preschools can be a microcosm of the larger society in which some values and beliefs are reinforced and other practices discouraged. Children learn the rules of social interaction and the pragmatics of interactions by practicing them and to some extent through trial and error.

Entering the Inner World of the Preschool Child

There are several "royal roads" to explore the emotional life, fantasies, fears, and memories of a young child. Perhaps the most easily accessible one is symbolic play and representational play, be it with miniature toys, puppets, or "dressing up games" in which the child acts like different characters. The plots of the representational play often are a sort of "working through" everyday experiences, emotionally charged events, and traumatic experiences. Generally, the play is self-directed, and spontaneous and is an external representation of what the child thinks, feels, and what he or she has been through. This is a natural way in which children process experiences and communicate with their parents. Unfortunately, many parents in the current electronic environment are not involved in these activities and spend time with their own "smartphones" or let

their children watch endless videos on their electronic tablets.

When the play involves events like hitting someone, making the "daddy fall from the ceiling of a dollhouse" many parents may be tempted to interrupt these sequences because "violence is not acceptable." However, this is a symbolic representation of the feelings the child may harbor. In general, it would be best if the child were free to display his or her fantasies in the play as this is a form of expressing intense feelings and of dealing with them as the child knows these representations are not in the real world.

Another major vehicle of expression for the child is drawings. If the child is provided a surface where he or she can draw and some sort of drawing instrument, there will be representations of everyday life, the family, the school, monsters, and other creatures that might be frightening, as well as positive figures. Like play, the drawings are spontaneous if the child is allowed this freedom of expression and serve to describe the internal world or "put it outside" and make it what one wants it to be. This spontaneous strategy to deal with situations is helpful to the child and communicates to those around him or her what has had an impact or impressed the son or daughter. In general, the greater the detail of the drawings, this represents a greater degree of intelligence in the visuospatial area and a "visual child" who is very bright and puts on the paper what he or she sees.

These forms of communication by the child are nonverbal but to the observer, they contain the impressions of life and particularly any stressful situations the child may have encountered. For the mind of the child, moving to another house, the birth of a sibling, starting to go to school all by oneself, etc. are all major stressors and they may cause a temporary regression in the child's behavior. Parents may see these changes as minor disruptions in the life of a young child but indeed they are major changes in the child's milieu or routine, which may leave him disoriented and somewhat confused as to what happened and why. Discussing these topics with the child and their understanding of them may help prevent resentment and intense anger at what just happened.

Preschool Children's Concept of Illness

It is pertinent to approach an understanding of what young children might think of illness, being sick, and the remedies for those illnesses. There are questions about causality, and "immanent justice": who gets sick and why. Immanent justice was described by Piaget, and it is like the notion that when one gets sick, it must be one's fault, although this way of thinking can persist into adulthood (Raman & Winer, 2004). A part of these explanations is of course influenced by the cultural milieu of the child: young children now talk about germs, bacteria, viruses, and the fear of contagion, particularly in the era of the pandemic of 2020. The question remains on how children can emotionally process and understand a chronic or severe illness and how parents might alleviate the possible self-blame associated with this causal thinking. A young child exposed to many concepts of illness, medicines, and the like will acquire this language of the body to refer to him or herself. A 3-year-old recently said that she had "a terrible immune system" to indicate that sometimes she gets sick from going to the child-care center.

Parent–Child Interactions in the Preschool Age

Parenting books are generally very popular with parents, many are eager to get advice on how to deal with the behavior and emotional life of young children. It is clear that parenting practices are highly influenced by cultural factors and that parents tend to see what they do as the "correct" way to raise children, to balance limits, discipline, and affection. Parents have different goals for their children. In many cultures in the world, parents want to instill in their children their values, such as a feeling of belonging and faithfulness to their family. Many also prolong dependency for a long time and becoming independent as a child or an adult is not such an important goal. This is more common in traditional societies and in cultures where families are

extended and there is high interdependence between family members. In that family structure, children may be allowed to be dependent on their parents for a much longer time, which is less common in more modern industrialized countries. For example, preschool children typically sleep in the same bed with their parents; they may be spoon-fed by a caregiver, particularly if the child is not a good eater. Parents may dress their children in the morning and be very permissive in general. Punishments may not be emphasized as the child is considered too young for that. This pattern is observed also in South American, Japanese, and other Asian cultures. The picture may change when the child becomes older.

By contrast, in countries like the United States, United Kingdom, and others, more urbanized families tend to reinforce independence and self-reliance in their children fairly soon, by comparison. The child may never sleep in the same bed with his or her parents. There is even a "sleep disorder" characterized as a "limit-setting sleep disorder" in which the parents "fail to enforce" the rule that the child should not leave his or her room and attempt to sleep with the parents. Self-feeding is encouraged since the end of the first year of life. Parents may use more behavioral strategies of positive and negative reinforcements to encourage or discourage certain behaviors. The child is taught to regulate him or herself when he or she is upset. There is more emphasis on "self-regulation" as opposed to "regulation with the help of another." These rules tend to be also applied regularly in preschool settings where the child is expected to practice a lot of self-reliance and self-regulation as well.

It seems clear that children may thrive in any of these two styles of rearing children, and those in which there is a mixture of practices. However, some children will struggle more if they are very strong-willed, more animated, and prone to show anger if their culture expects a high degree of self-control. Similarly, if a child is very timid and anxious, does not speak to any strangers, and never speaks his or her mind, a traditional culture that encourages reliance on others may reinforce that dependency.

There is no ideal culture or a best culture, and that milieu reinforces the values that are more important in that context and that lead to desirable personality or character features.

Despite this, it can be said that we know more about "what not to do" with preschool children, rather than what are the best practices. In most cultures, it would be undesirable to humiliate and scare young children, who are very impressionable and are so dependent on their parents. Extensive and cruel physical discipline also tends to create long-lasting damage in the short and long term. Long separations from parents, leaving them with different caregivers instead of the constant presence of a few caretakers is also detrimental. Exposing children to frequent and intense marital disputes, domestic violence, and a regime of intense control, criticism, and rejection are also highly detrimental.

Clinicians and other adults that encounter young children could be prepared to detect alarm signs in them, such as aggressive behavior, extensive fears, and post-traumatic acting out. Behaviors like depression, internalized anxiety, and dissociative phenomena are more often overlooked by clinicians and staff in various settings because these children tend not to create disturbances or give problems to adults, but could suffer considerably.

Young children are very fragile in the physical sense and the emotional and psychological arenas. Due to our "amnesia" of the preschool age, adults may not reflect on how young children experience an adult world that can feel unsafe, overwhelming, or chaotic. The above account gives some idea about the emotional needs of young children and their vulnerabilities.

References

Bloom, L. (1998). *Language acquisition in its developmental context*.

Burdelski, M. (2010). Socializing politeness routines: Action, other-orientation, and embodiment in a Japanese preschool. *Journal of Pragmatics, 42*(6), 1606–1621.

Burlingham, D., & Freud, A. (1942). *Young children in wartime*. Allen & Unwin.

Carlson, E. A., Yates, T. M., & Sroufe, L. A. (2009). Dissociation and development of the self. In P. F. Dell, J. O'Neil, & E. Somer (Eds.), *Dissociation and the dissociative disorders*. Routledge.

Chess, S., & Thomas, A. (2013). *Temperament: Theory and practice*. Routledge.

Clark, R., Menna, R., McAndrew, A. J., & Johnson, E. M. (2020). Language, aggression, and self-regulation in young children. *Journal of Emotional and Behavioral Disorders, 29*, 135. https://doi.org/10.1177/10634266209376911

Davies, D. (2010). *Child development: A practitioner's guide*. Guilford Press.

Fabes, R. A., Gaertner, B. M., & Popp, T. K. (2006). *Getting along with others: Social competence in early childhood*.

Fogel, A., de Koeyer, I., Bellagamba, F., & Bell, H. (2002). The dialogical self in the first two years of life: Embarking on a journey of discovery. *Theory and Psychology, 12*, 191–205.

Fox, N. A., Henderson, H. A., Pérez-Edgar, K., & White, L. K. (2008). The biology of temperament: An integrative approach. In C. A. Nelson & M. Luciana (Eds.), *Handbook of developmental cognitive neuroscience* (pp. 839–853). MIT Press.

Fraiberg, S. H. (1996). *The magic years: Understanding and handling the problems of early childhood*. Simon and Schuster.

Freud, A. (1952). The role of bodily illness in the mental life of children. *The Psychoanalytic Study of the Child, 7*(1), 69–81.

Frisch, N. S. (2006). Drawing in preschools: A didactic experience. *International Journal of Art & Design Education, 25*(1), 74–85.

Frith, C., & Frith, U. (2005). Theory of mind. *Current Biology, 15*(17), 644–645.

Gallese, V., Fadiga, L., Fogass, i. L., & Rizzolatti, G. (2002). Action representation and the inferior parietal lobe. In W. Prinz & B. Hommel (Eds.), *Common mechanisms in perception and action: Attention and performance* (pp. 334–355). Oxford University Press.

Galyer, K. T., & Evans, I. M. (2001). Pretend play and the development of emotion regulation in preschool children. *Early Child Development and Care, 166*(1), 93–108.

Gehard, U. (2020). *Kind und Natur. Die Bedeutung der Natur für die Psychische Entwicklung* (pp. 51–65). Springer VS.

Hayne, H., & Jack, F. (2011). Childhood amnesia. *Wiley Interdisciplinary Reviews: Cognitive Science, 2*(2), 136–145.

Hellige, J. B. (2001). *Hemispheric asymmetry: What's right and what's left* (Vol. 6). Harvard University Press.

Hertzig, M. E. (2012). Temperament: Then and now. *The Journal of Nervous and Mental Disease, 200*(8), 659–663.

Kagan, J., & Snidman, N. C. (2009). *The long shadow of temperament*. Harvard University Press.

Knudsen, J. S. (2008). Children's improvised vocalisations: Learning, communication, and technology of the self. *Contemporary Issues in Early Childhood, 9*(4), 287–296.

Kraft, K., & Berk, L. E. (1998). Private speech in two preschools: Significance of open-ended activities and make-believe play for verbal self-regulation. *Early Childhood Research Quarterly, 13*, 637–658.

Lacourse, E., Nagin, D. S., Vitaro, F., Côté, S., Arseneault, L., & Tremblay, R. E. (2006). Prediction of early-onset deviant peer group affiliation: A 12-year longitudinal study. *Archives of General Psychiatry, 63*(5), 562–568.

Lieberman, A. F. (2017). *The emotional life of the toddler*. Simon and Schuster.

Martin, C. L., Fabes, R. A., Hanish, L. D., & Hollenstein, T. (2005). Social dynamics in the preschool. *Developmental Review, 25*, 299–327.

Montessori, M. (2004). *The Montessori method: The origins of an educational innovation: Including an abridged and annotated edition of Maria Montessori's the Montessori method*. Rowman & Littlefield.

Montessori, M., Hunt, J. M., & Valsiner, J. (2014). *The Montessori method* (Vol. 2). Roudledge.

Moriguchi, Y., & Hiraki, K. (2009). Neural origin of cognitive shifting in young children. *Proceedings of the National Academy of Sciences, 106*(14), 6017–6021.

Needham, A., & Libertus, K. (2011). Embodiment in early development. *Cognitive Science, 2*, 117–123.

Pauen, S. (2011). *Vom Baby zum Kleinkind. Entwicklungstagebuch zur Beobachtung und Begleitung in den ersten Lebensjahren*. Spektrum Akademischer Verlag.

Paulus, M., Wörle, M., & Christner, N. (2020). The emergence of human altruism: Preschool children develop a norm for empathy-based comforting. *Journal of Cognition and Development, 21*(1), 104–124.

Piaget, J. (1964). Part I: Cognitive development in children: Piaget development and learning. *Journal of Research in Science Teaching, 2*(3), 176–186.

Principe, C. P., & Langlois, J. H. (2011). Faces differing in attractiveness elicit corresponding affective responses. *Cognition and Emotion, 25*(1), 140–148.

Raman, L., & Winer, G. A. (2004). Evidence of more immanent justice responding in adults than children: A challenge to traditional developmental theories. *British Journal of Developmental Psychology, 22*(2), 255–274.

Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience, 27*, 169–192.

Rothbart, M. K., & Derryberry, D. (2002). Temperament in children. In *Psychology at the turn of the millennium* (pp. 33–52). Psychology Press.

Santos, A. J., Daniel, J. R., Fernandes, C., & Vaughn, B. E. (2015). Affiliative subgroups in preschool classrooms: Integrating constructs and methods from social ethology and sociometric traditions. *PloS One, 10*(7), e0130932.

Sroufe, L. A., Egeland, B., Carlson, E. A., & Collins, W. A. (2009). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. Guilford Press.

Thelen, E. (2000). Grounded in the world. Developmental origins of the embodied mind. *Infancy, 1*(1), 3–28.

Tompkins, V., Blosser, M. K., & Downing, M. (2020). False belief understanding and narrative comprehension in the preschool years. *Cognitive Development, 56*, 1–18.

Tremblay, R. E., Nagin, D. S., Séguin, J. R., Zoccolillo, M., Zelazo, P. D., Boivin, M., et al. (2004). Physical aggression during early childhood: Trajectories and predictors. *Pediatrics, 114*(1), e43–e50.

Wertsch, J. V. (1984). The zone of proximal development: Some conceptual issues. *New Directions for Child and Adolescent Development, 1984*(23), 7–18.

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