Introduction to Language

What is Language?

Good question. The study of language, or “linguistics,” is a paradox. On one hand, it is “a mystery wrapped in an enigma.” Philosophers, cognitive scientists, linguists, poets, and pathologists devote their entire lives to understanding the multifaceted nature of language. How did language evolved in human beings? How are new languages created? How is it possible that very young children internalize all the rules governing language and its functions? Why is it that language so stirs our emotions? What is the relationship between thought and language? Contemplating the answers to these questions leads us through a labyrinth of theory and hypothesis. On the other hand, language is so practical and commonplace that we don’t even pay attention to it. Everybody uses it—every day, everyday. We don’t even have to think about language. We don’t know how we learned language and we can’t remember a time when we didn’t have language.

To many people, the words “speech,” “language,” and “communication” are much the same. Although they are clearly related, they are not the same thing. Language can be defined as a “socially shared code or conventional system for representing concepts with arbitrary symbols and the rules governing the combinations of those symbols.” (Owens, 1992) Or, as it says in Wikipedia, “something” representing “something else.” Following this definition, mathematics is a language, with the symbol “4” representing a quantity we have agreed is the word “four.” Music is another language, with the name “c” representing the perception of a particular pitch, notated by a black shape in a particular place on a group of lines. American Sign Language is another language, with agreed upon gestures and facial expressions following particular grammatical rules. Children in elementary school frequently develop their own languages, kept secret from the teacher, and only those children in the club can understand.

Speech is an aspect of language; an agreement on the meaning attached to particular sounds. A spoken word is a simply a “sound symbol” for a concept. However, speech is not the same as language; speech is a verbal means of communicating. Speech requires very precise neural muscular coordination to produce specific sounds that convey meaning. Without meaning attached, speech is only noise. While other animals also use sounds to convey meaning, the unique structure of the human vocal tract allows for a highly complex variety of sound. Along with sound, speech also includes voice quality, inflection, and intonation. Listen to the sentence, “You are going to the play.” If we change our inflection and intonation to emphasis different words, the meaning changes.
as well. “You are going to the play?” “You are going to the play?” “You are going to the play.” Facial expression, body posture, and gesture are also significant in speech. In fact, it has been estimated that in conversation, up to 60% of meaning is conveyed nonverbally. (Owens, 1992) Languages exist because the users have agreed on the symbols that represent the concepts, and how those symbols will be combined. In this way, we can share information, provided we understand the code. If I say to you, “ocean,” you understand what I mean without traveling physically to the coast. My concept was transmitted to you through a symbol, and you decoded it according to your own concept. Not only do we agree on the symbols and what they represent, but we also share an understanding of how those symbols are combined, both within a single utterance, and within a longer structure. If I say “shin-oh,” it is meaningless, but “oh-shin” you understand. If I say “the went we ocean to,” it is meaningless, but simply by changing the sound symbols around, “We went to the ocean,” becomes clear. The sounds and symbols we use are specific to our language, and can be combined in an infinite number of ways to transmit an infinite number of concepts. Yet language is not simply a mechanical set of rules, it is a dynamic process dependent upon social context. It is a facet of humanity. It is a social system, used socially.

Language and speech are contained within the larger process of “communication”. Communication is “the process of exchanging information and ideas between participants.” Communication requires activity on the part of each participant, transmitting, interpreting, and responding. Communication can be verbal or non-verbal. Non-verbal communication involves reading, writing, and signing, as well as nonlinguistic cues such as gestures, body posture and movement, eye contact, facial expression, and physical proximity. We can convey meaning through a look, a raised eyebrow, or even by moving closer to someone. It is virtually impossible not to communicate- even by attempting to not communicate, you are communicating your intention! (Owens, 1992)

Language exists because of communication. Because we wish to share our thoughts and ideas with others, to communicate, we have developed language, and its subset, speech. Language exists within the social community and is influenced by the culture and environment, but our community does not “teach” us language. Language is a part of our culture, but we do not learn language from our elders the way we learn about our history or traditions. Steven Pinker, a cognitive scientist and linguist, explains language in this way: “(Language) is a distinct piece of the biological makeup of our brains. Language is a complex, specialized skill, which develops in the child spontaneously, without conscious effort or formal instruction, is deployed without awareness of its underlying logic, is qualitatively the same in every individual, and is distinct from more general abilities to process information.” (Pinker, 1994, p.4)
Pinker continues to explain that this is why some cognitive scientists describe language as a psychological function, a mental organ, or a neural system, but he prefers the simple term, “instinct.” He relates our ability to use language to the ability that bats have to use sonar, and that spiders have to spin webs- it is a part of how their brains have evolved. Just consider how difficult it is for adults to learn a new language, and then consider how typical three-year olds, who do not yet possess logic or a reasoning mind, can understand and produce grammatically complex sentences without any formal training. This is why most linguists today support the idea that language is an instinct; it is hard-wired into our brains. (Pinker, 1994; Eliot, 1999)

How Language Develops

Universal Patterns
Children all around the world learn language in a remarkable similar way. They progress from single words to short, 2-3 word utterances, and then begin to build and modify in a universal, predictable pattern. Regardless of the seeming complexity of the language, the development milestones are similar for all children- first words around 1 year, two-word phrases around 18 months, and then children begin to modify these longer phrase/sentence structures following the linguist rules of their particular language. This pattern of language development is so predictable that many linguists believe that children have an inborn mechanism in their brain that enables them to acquire language. (Owens, 1992)

In the late 1950’s Noam Chomsky presented the idea of “universal grammar.” He argued that since all of the world’s languages share the same fundamental structure, language must be inherent in the human mind. This idea may explain how very young children innately understand the grammatical rules of their language and how children are able to generate new phrases and combinations that they have never heard. (Eliot, 1999, pp. 352-3) Although environment is essential for language learning, children do not learn “their mother tongue by imitating their mothers.” Children do not just repeat what they hear; their creative new constructions show an inherent understanding of language rules. This is why two-year old Julian referred to his forehead as his “fivehead,” why little David called the windshield wipers the “swishwipers,” and we typically hear little children say “we goed to the store,” or “we holded the kitties.” (Pinker, 1994) These are examples of the brain’s spontaneous ability to identify and apply complex language rules such as compound words or past tense verb endings to generate new words or phrases that they have never heard modeled.
Exposure to Language

Just as we are born with the potential to walk but are not born walking, so too are we born with the potential for language but we are not born speaking. Although our capacity for language is inherent, the language that we end up speaking, and even the manner in which we speak it, is determined by our experiences in our environment. We know that any baby adopted from one culture into another learns to speak the language she is surrounded by, and this becomes her native tongue. “This is because the very act of learning language is what directs the specialization of the linguistic brain.” (Eliot, 1999, p. 353) The language areas of the brain develop based upon the specific sensory input from the environment.

Language development in the brain is dependent upon interaction with the environment. It is essential that children be immersed in language and have opportunities to practice communicating. Much of what we know about the relationship of language exposure to language development comes from the case studies of children who have been deprived of language. You have already heard of Victor, the “Wild Child of Aveyron,” discovered in the woods in France at age 12. Jean Itard tried to rehabilitate him, but Victor never did learn to speak. Another child, Genie, was kept tragically isolated by her psychotic father for 13 years. Although she received intensive rehabilitation, her language never progressed beyond that of a two year old. A fairly recent case, Chelsea, offers a social contrast to Victor and Genie. Chelsea was raised in a normal family in California, but they did not discover she was deaf until she was 32 years old. At that time she was fitted for hearing aids and had her first exposure to spoken language, but it was too late. She learned many words, but was unable to master simple sentence structure, and had difficulty with comprehension. (Eliot, 1999, pp.359-361) These children are tragic examples that if human beings are deprived of language experience long enough, they can lose the ability to learn and use language.

While most children receive enough stimulation to develop basic language, the amount and quality of language experiences in the child’s environment have a direct relationship to later language use and learning. A well-known study, the “30 Million Word Gap” by Hart and Risley showed that by the age of four, children in language-rich homes heard 30 million more words than children in language-poor homes. Longitudinal follow-up studies indicated a high correlation between vocabulary sizes at age three and language test scores at ages nine and ten, in areas of vocabulary, listening, syntax, and
reading comprehension. This indicates that low vocabulary in preschool may predict low academic achievement in language arts in elementary school.¹

The reason for this connection is because in early childhood the brain develops according to interaction with the environment. Just as the act of seeing completes the neural pathways for vision in the brain, hearing and using language completes the neural pathways for language use. And like other neural developments, there is a critical period for language development. “A child's brain is maximally capable of absorbing language, particularly the rules and logic of grammar, until six or seven years of age.” (Eliot, 1999, p. 363) The baby’s brain wires up for language only when it is exposed to the combinations of sound, meaning, and structure of a particular language. Or in the case of children who are deaf, sight, meaning and structure. Brain measures of perception of language sounds, or phonemes, during the first year are strongly related to the baby’s understanding of words and structure in the second and third year. (Kuhl&Rivera-Gaxiola, 2008) Different parts of the brain control these different aspects of language- and these areas develop according to the language that the child hears in her environment. This is why it is critically important that we understand that the language stimulation a child receives from birth until around age six profoundly affects her ability to use language for the rest of her life.

How Children Develop Language

Preverbal Communication

The word infant comes from the Latin word infans, which means, “not speaking.” The very word “infant” implies a subtle prejudice against the newborn’s ability to communicate. But remember that speaking is only one method of communication, and through their nonverbal behavior, infants do begin communicating at birth.² “By interacting with objects and people in the environment, the infant forms basic definitions that are later paired with words, or symbols… Language is a communication tool whose development is dependent upon the prior development of communication… Words and symbols have meaning only as they relate to underlying cognitive

¹ In the 1995 study, Betty Hart and Todd Risley spent 2 ½ years documenting the language of 42 families in Kansas City in three settings: professional families, working class families, and families on welfare. Data showed that children in families on welfare heard on average 616 words per hour, and children in professional families heard 2153 words per hour. This study was used to support early childhood programs such as Head Start. (Hart and Risley, Meaningful Differences in the Everyday Experience of Young American Children, Baltimore: P.H.Brooks, 1995)

² Dr. Montanaro writes in Understanding the Human Being p.70, “The newborn moves the different parts of his body in order to attract attention in the environment, to establish a relationship with it and to try his power in the new situation in which he finds himself. Such gestures include: movement on the head, arms, hands, legs and trunk; looking a persons and objects in the surrounding area; smiling; crying. Every aspect of this communication has many variants and they will be used more or less according to the effect produced.”
representations.” (Owens, 1992, p. 164) In other words, the simple interactions between infants and their caregivers, the smiles, the gestures, the shared attention to something interesting, form the underlying concepts that will later give rise to words—“Mama,” “look,” “kitty.”

Clearly, the process of language, of associating a symbol with an idea, cannot exist in isolation. The interactions between parent and infant give social significance to the child’s actions. Infants begin to recognize the patterns involved to satisfy an emotional need. They gradually learn what different facial expressions and gestures mean, and connect them with moods and behaviors. When parents respond to the baby’s interest by changing their voice and expression, such as smiles and happy sounds, the baby often responds by expressing a range of pleasure as well. Later, the baby points to something and the parent responds. This type of “purposeful” communication is the very beginning of problem solving. “Preverbal problem solving interactions create the context for mastering meaningful symbols. Without this basic level of knowing through doing, words may be used instrumentally, but they have no other intrinsic meaning.” (Greenspan, 2004, p.196) Children with autism do not relate to this social interaction, and lack experience with purposeful communication. They may use words, but lack social meaning, such as when a boy with autism greeted my husband with the words, “It’s a cow Dave,” because the last time they played together they named farm animals.

When adults interact with babies, we use the same patterns as we use when we communicate with other adults. We take turns, we interpret and respond, we adjust our pace and our expressions to the dialogue we are in, whether it is verbal or non-verbal. In essence, when we interact with a baby, we treat her as though she already understands and is communicating with us. The fact that we do this is extremely helpful. The child internalizes the structure and pattern of language use, and her own meaning and use of language becomes integrated with what she experiences in her environment. (Owens, 1992)

In addition to recognizing patterns in emotional and social interactions, the infant’s brain is uniquely specialized to respond to human speech, detect the boundaries between words (just try figuring that one out when you listen to a string of words in a Japanese sentence), and even to discriminate among the different individual sounds of speech (phonemes) in all the world’s languages. (Eliot, 1999, p. 366; Kuhl & Rivera-Gaxiola, 2008) During the first year, babies perception of sounds in their native language increase, while their perception of sounds for other languages decrease. In this way, by the end of the first year, the infant brain is no longer universally prepared for all languages, but is instead primed to acquire the language, or languages, of his own culture. (Kuhl & Rivera-Gaxiola, 2008)
While babies all over the world make the same kinds of cooing sounds, babbling, which grows out of cooing at about 5-6 months, eventually represents the sounds of the language the child hears in her environment. Babbling is how the baby imitates the sounds of the language he hears, and results in exercising the developing vocal machinery of the mouth and throat. Babies who are deaf will quit babbling after just a few months, but those who are exposed to sign language will then begin to “babble” with their fingers. (Eliot, 1999)

First Words
Babies begin to make the transition from babbling to first words at about one year old. Scientists believe that babies’ brains are innately predisposed to assume three things about words- words refer to whole objects rather than their parts; words refer to classifications\(^3\) rather than individual members; and that objects only have one name. (Eliot, 1999) These assumptions help babies figure out the names for things. This is an amazing insight for a little child - names, or words, are symbols representing the something else.

_Every time a child learns what it means to name something, a major cognitive change also has begun, connecting the developing oral language system to developing conceptual systems._ (Wolf, 2007, p. 84) Every aspect of oral language—understanding the sounds in words, that words are symbols representing something else, and that combinations of words have particular order—directly relates to the child’s understanding of speech and later, to written language.

Language exposure from birth to three has a profound impact on how the brain is programmed to learn and use language in later years. This explains the significance of the 30 million-word gap; why children in language-poor environments face later challenges in writing and reading. Without a doubt, speech is the most important form of language stimulation a baby receives. The more children are spoken to, the more they understand about oral language. “When parents talk to their babies, they are activating hearing, social, emotional, and linguistic centers of the brain all at once.” (Eliot, 1999, p. 367) Words are symbols representing ideas. This process of using symbols to represent shared understanding is of utmost importance in human lives, and it all happens in the first years of life—much of it while we wonder if the baby can even understand.

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\(^3\) This is an interesting example of the mathematical mind and the very young age at which babies intuit classifications.
The Montessori Context for Language Development

Why We Tell Stories
By Lisel Muller

1
Because we used to have leaves
and on damp days
our muscles feel a tug,
painful now, from when roots
pulled us into the ground
and because our children believe
they can fly, an instinct retained
from when the bones in our arms
were shaped like zithers and broke
neatly under their feathers
and because before we had lungs
we knew how far it was to the bottom
as we floated open-eyed
like painted scarves through the scenery
of dreams, and because we awakened
and learned to

2
We sat by the fire in our caves,
and because we were poor, we made up a tale
about a treasure mountain
that would open only for us
and because we were always defeated,
we invented impossible riddles
only we could solve,
monsters only we could kill,
women who could love no one else
and because we had survived
sisters and brothers, daughters and sons,
we discovered bones that rose
from the dark earth and sang
as white birds in the trees
Because the story of our life becomes our life
Because each of us tells the same story
but tells it differently
and none of us tells it the same way twice
Because grandmothers looking like spiders
want to enchant the children
and grandfathers need to convince us
what happened happened because of them
and though we listen only
haphazardly, with one ear,
we will begin our story
with the word and

Language and the Joy of Communication
Why is this poem so significant? Within these words the story of language and humanity are intertwined, as they always have been and as they always should be. With these words our minds are bound together as we listen, and we imagine we can remember when we were part of the earth and grew out of it. It is words that link us with our ancestors in that cave, words that link us today in this shared experience, and words that continue our story into the unknown. Always, words tell the story of human beings,

“Because the story of our life becomes our life, because each of us tells the same story but tells it differently and none of us tells it the same way twice.”

As each child unlocks the mystery and power of language, she is born into the communion of others who share the same history. Each child’s journey into language is a reflection of the evolution of language for the human species- the desire and need to communicate with each other, gestures and sounds to represent ideas, thoughts preserved through written symbols. This journey through spoken and written word is of profound importance to the child. Even though she is not conscious of why, she knows she loves words and language, because through them, she is connected to her people.

We are the children’s guides through the journey of language, and it is their birthright that we make this journey one of exploration and discovery. Our goal is not to teach the child language, no more
than we taught him how to speak. What we do is simple; we share the joy of communication and offer him all the richness of language so that he may develop his potential as a fully realized human being of his culture. “We begin our story with the word and”

**Language and the Human Tendencies**

Montessori recognized **communication** as a **human tendency**. We need to communicate. This is a constant that transcends time and culture. Human beings need to share our thoughts and ideas with others. It is so important to our well-being that our most severe punishment is solitary confinement, where we are denied communication with others. The human tendency for communication works hand in hand with the tendencies for **order** and **exploration**.

“Communication is a function of order and it is this tendency, along with exploration, that leads the child on to further discoveries in the field of language. Language is an expression of the spirit of man...and if we make use of the tendencies of order and exploration, the child will come to his own discovery that there are other ways of communicating other than spoken language.”(Stephenson, (1970) “Montessori: An Unfolding-The Child from 3-6, p. 10)

Language itself is an **abstraction**; our minds are born with the potential to create abstractions and use our **imagination**s to transcend our daily experience. In *The Absorbent Mind*, Montessori writes, “These two powers of the mind, (imagination and abstraction) go beyond the simple perception of things actually present, play a mutual part in the construction of the mind’s content. Both are necessary for the building up of language. A precise alphabet on the one hand and grammatical rules on the other, permit an indefinite accumulation of the wealth of words. For words, if they are to be utilized and enrich the language, must be capable of taking their place in the ground-work of sounds and of grammatical order. And what happens in the construction of a language happens also in the construction of the mind.”(Montessori, (1949) *The Absorbent Mind*, p. 184, Kalakshetra, 1984) Our human tendencies for abstraction and imagination develop alongside our ability to communicate.

**Language and the Absorbent Mind**

We are born with the vast potential to develop communication. But while nature gives us the potential for language, it does not dictate which language we learn to speak. Montessori wrote that, “Humanity is distinguished by this power. Not to possess language, but to possess the mechanism for creating language.” (Montessori, (1946) *Education for a New World*, “The Mystery of Language,” p. 43, Kalakshetra, 1974)
We have called the years from birth to three, the first sub-phase of the first plane of development, that of the “unconscious creator.” Using the power of the absorbent mind, the infant begins almost immediately to absorb the patterns of language. He is born with the ability to recognize and produce the sounds of any human language, but by around 6 months, he has fine-tuned this perception for only the language or languages in his environment. By age three he has constructed all of the physical and mental mechanisms for language, and can speak all of the languages in his environment. Montessori writes, “He begins this work in the darkness of the subconscious mind, and here it develops and fixes itself permanently.” (Montessori, 1946 Education for a New World, “The Mystery of Language,” p. 40, Kalakshetra, 1974)

The child enters the Casa around age three, fully versed in her language, although there is still much to develop. This is the time of the “conscious worker.” We take advantage of her continued interest in learning new words, and as her motor skills and mental development merge again as they did with speech, she will delve first into writing, and then later into reading. This passionate interest in words extends to the parts of speech, and children between 5 ½ and 7½ -8 show an intense interest in grammar and syntax as the absorbent mind fades at the end of the first plane and they approach words with a reasoning mind. 4 (Montessori, 1916 Advanced Montessori Method, Vol. 2, pp. 8-9, Clio, 1965) It is her sensitive period for language that impels her to seek out with such passion and enjoyment all that language has to offer.

The Sensitive Period for Language
The child’s construction of language is aided by a special sensitivity to language. The sensitive period for language begins at birth, and is active until he is at least six years old. This sensitive period has several highlights that lead him towards constructing his language. The newborn has a special sensitivity for distinguishing the sounds of human speech from all of the sounds around him. The infant is able to distinguish the phonemes, or sounds, of all the world’s languages, as well as the boundaries between words.

His first intentional spoken word comes when he is around one year old. (Montessori, 1949 The Absorbent Mind, p. 124, Kalakshetra, 1984) Montessori calls this a “great event,” a “great conquest, an internal conquest, a conquest of consciousness and intelligence which leads the child to express an idea or indicate an object.” (Montessori, 1946, London lecture # 8) This is a period in

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4 Montessori writes in Advanced Montessori Method Vol. 2, that 4 or 4 ½ is the time when children show the most interest and passion about writing, and 5 ½ - 7 ½ -8 is the ideal time for exploring words through analytical study of grammar.
which the child has a profound interest in the names of things. (Montanaro, 1991) The young child adds words slowly until he hits a critical mass of about 50 words, and then his vocabulary explodes. During this period, children show a real hunger and love for words, especially nouns, and learn the meaning of up to 8 new words every day - that's about one word every two hours they're awake. (Eliot, 1999) My sons loved nothing better than to sit down with Richard Scarry's "Biggest Word Book Ever" and have someone name every item on every page.

No word is too long or too complicated, and as every parent knows, even very young children have no difficulty at all discerning the difference between the backhoe, the excavator, and the front loader. The vocabulary explosion typically begins around 18 months, with the realization that everything has a name, and not surprisingly, is associated with a spurt in brain development. (Eliot, 1999) The vocabulary explosion marks the brain’s ability to connect and integrate the systems of vision, cognition, and language. “Every time a child learns what it means to name something, a major cognitive change also has begun, connecting the developing oral language system to developing conceptual systems.” (Wolf, 2007, p. 84)

From around 18-24 months onward, children develop the different parts of speech through an “explosion in grammar.” Children rapidly acquire all of the basic rules of syntax and can demonstrate a remarkable level of understanding of the world around them. (Montanaro, 1991; Eliot, 1999)

Using the power of the absorbent mind and the actions propelled by sensitive periods enables the child to fulfill the human tendency for communication. Why this long, involved process to learn language? If it is so essential, why isn’t the child just born knowing how to speak? Montessori answers, “Because language does not exist in nature, it is a product of mankind. In the beginning, when man came first on earth, he had no language – language had to be created by humanity through a long period of civilization. The child must be born without any language at all so that he can take the language of his environment.” (Montessori, 1946) London lecture # 8

Every child begins his journey at the present moment in time, becoming of that time but also of the future. With language comes the child’s entry into the collective thought of those that came before, and allows him to leave his mark for those who come after. Language grows with human thought, and requires the company of other humans in order to develop. The child cannot do this remarkable work in isolation. We must offer him the help that he needs through an education that works with his natural interest and abilities, and celebrates his joy in discovery and well as dignity and respect for his entree into the uniquely human heritage that is language.
Overview of the Montessori Approach to Language

When we look at the Montessori approach to language, we have to remember that... “In reality, there is no ‘Montessori’ Method, there are not ‘Montessori’ Principles –– what we are speaking of are universal principles guiding the development of man from conception to maturity.” (Stephenson, (1970) “Montessori: An Unfolding-The Child from 3-6, p. 7) Our work, as always, is to understand the universal principles for child development, and provide materials and activities that help the child grow and learn.

The main purpose of the language area is to support self-construction in the first plane of development. The activities and materials we offer support the physical, mental, and spiritual development of the child. We support physical development through coordinated, purposeful, and ordered movements for verbal expression and handwriting. We support mental development through opportunities to form ideas, abstractions, and insights that can be communicated both verbally and symbolically. We help the child build the mental capacity to seek, understand, and interpret the spoken and symbolic communication of others. We support spiritual development though building self-confidence, self-worth, and empathy. We help the child feel she is capable of meaningful and effective communication, worthy of respectful interpersonal communication, and able to identify with the expressed thoughts, feelings, and experiences of others. We do this by following the universal pattern of language development, and we build upon what the child already knows.

The Four Layers of Language

When children develop language, they explore four distinct yet integrated layers of language:
- **Phonemes**, the individual sounds of a language (/b/, /t/, /s/, /ch/, /th/)
- **Morphemes**, the smallest meaningful units of language (cat, the, ly, ed, s)
- **Syntax**, the structure of language (the green house, not the house green; “Sarah baked a cake,” makes sense but “The cake baked Sarah,” does not. “The fox chased the rabbit,” differs in meaning from “The rabbit chased the fox.”)
- **Semantics**, meaning or context (“They are eating apples” could mean people are eating apples, or could mean ‘eating apples’ as opposed to ‘baking apples’)

In progressing from babbling, to single words, to two-word phrases, and finally to sentences, the child who comes to the Casa already has an unconscious understanding of these four layers in her oral language. During the years from 3-6, we help bring this tacit understanding into her conscious awareness, so that she can further develop her language into a fully functional tool
that can be used throughout life. It is only logical that we utilize the four layers of language that the child has already explored with spoken language when we support the development of writing and reading.

The Four Discoveries in Language
In the Casa, we combine our understanding of the layers of language to help each child make four important discoveries about language:

1) there are more words than she already knows
2) she can make her language visible to others
3) she can interpret the thoughts of others, even those others are not present
4) words, spoken or written, carry out a function and work in a particular order. (Travis, 1996)

To help the child make these discoveries, we organize the language area into three sections: spoken language, writing, and reading. Spoken language must come first, building on what the child already experienced and formed a symbol for, then writing, and finally, reading. Remember that language itself is an abstraction- a word is a symbol representing something else, and written words are symbols representing symbols! In order to create an abstraction, there must first be a concrete experience.

Our guiding principle is that experience precedes language. Any language the child is going to use must to be attached to an experience she has already had. This is true for all three areas of language- spoken, written, and reading. Just as the toddler’s first words are concepts she has already experienced, so too the early writer writes about what she already knows, and later, the early reader reads about what she already knows. The principle of “experience before language” follows the natural progression of how children develop language.

Equally important is our understanding that in the first plane, children experience language as something they create. First they create it, and then they can use it. A tool has to be forged before it can be used. Language is not the primary way that children under six learn anything. In the first plane, children learn by doing, through concrete, sensorial activity. It is from concrete experiences that the child can create abstractions, and even when they are learning something as abstract as language, we attach a concrete experience.
When we introduce an area of language to the child, we continue working and exploring in that area until the child leaves the Casa. Spoken language, writing, and reading begin at different times, but continue weaving into one another like silken threads in a tapestry, each one enriching and strengthening the others.

**Introduction to Spoken Language**

The first area of language that we will look at is also the very first area of language that the children discover. Spoken language is at the very center of our work with children. Our rooms should not be silent tombs of concentration. Who is it that needs the most practice speaking using language? The children. Yet who is often the only one allowed to talk? The adult. This cannot be the case in our classrooms. The child brings to us a natural fascination with words and language. This is her gift to us. Unless there are obstacles blocking her development, we do not have to work to make the child interested in language. We only have to enjoy it with her. The child will learn from us simply by how we interact and speak with her, and how she interacts and speaks with the other children. This is also why we must be so careful about what we model to the children. **Our communications must be thoughtful, rich, precise, and respectful.** We want to offer the children only the very finest of silken threads to weave into their own language.

Spoken language is the basis for how we relate to the world around us, and how we relate to one another. On the very first day, when we greet this little person we begin our relationship and join together with the words, “Good morning! I’m so glad to see you today!” This is an example of **social language,** language needed in specific social situations. We give the children opportunities to learn and practice social language, often accompanied by a small gesture, so that they have the means for gracious and courteous social interactions. Possessing this language aids the child in adaptation to the community of the classroom and society at large, and leads to functional and psychological independence, helping her to gain confidence in self-expression.

In order to help the child with the first of the four discoveries, “There are more words than I already know,” we offer many spoken language activities for **enrichment of vocabulary.** We have sets of **classified picture cards,** we gives the names of objects and people in the environment, and we give the specific language for the qualities represented in the sensorial area. New vocabulary is presented in **conversation** and with a technique known as the “**Three Period Lesson.**” Having a rich vocabulary allows the child to express herself with increasing clarity and confidence. Having just the right words can move an experience to the wider social sphere, making individual thoughts and experiences part of the greater human experience. Words are the gateway to shared
experience, but words also increase the clarity of the thought itself. The more precise the vocabulary, the more precisely our thoughts can move from concrete experience into abstract conception and imagination. With words, we can compare, contrast, and make classifications on an abstract plane, when thought is possible but experience is not.

On a spoken level, we help the child explore the order and structure of words and phrases. We use story telling, poetry, read aloud and song. We have spontaneous conversations and play “the Question Game.” We play little listening games involving the various parts of speech – “Put your hands on top of your head, Evan.” “Stroll majestically down the aisle, Alex.” “Find a green cloth, Eva.” The child has already built up an understanding of grammar in her own use of oral language, but we approach this on a more conscious level, intentionally choosing poems or stories that play with word order for literary effect – “Come let us gather, now to sing,” or choosing silly songs or poems with alliteration or rhymes - “Eleven lemmings lick luscious lollipops.” Remember, everything the child will explore with written language, we want to offer first through spoken language experiences.

The Bridge to Literacy
In addition to exploring how words and phrases function in groups, there are two specific activities we offer the children to explore the individual sounds that make up a single word: “the sound game,” and the sandpaper letters. The sound game directly relates to the experiences with phonemes the child had as a baby, when she explored the sounds of her language through babbling. However, with the sound game, we take a conscious approach to identifying the individual sounds we hear in a word. The child begins by identifying words that have a particular sound, and progresses to identifying all of the sounds within a word. We introduce the sandpaper letters with the enticing question, “Would you like to see what /s/ looks like?” Through the sandpaper letters, the child begins to realize how we make our language visible.

The importance of spoken language cannot be overemphasized, and yet understanding the full value of spoken language is often difficult for teachers. In addition to providing the foundations for later learning, the spoken language activities are a wonderful way to build a relationship of trust, respect, and love of learning with the children. When we offer these activities, we present the children with an opportunity to connect with us and enjoy how wonderful it feels to be a valued member of the social group. This is a powerful motive for activity, and can be the perfect entrée for the child into cycles of concentrated activity. It is very important to realize that as wonderful as the later
presentations for written language and reading are, it was only normalized children who made the “explosions” into writing and reading.5

We cannot make use of the human tendency for communication or the sensitive period for language if child is not able to listen to her inner guide and follow her natural, normal path of development. However, by taking advantage of the opportunities in spoken language for normalizing cycles of activity, we will insure that the child has opportunities for concentration as well as all of the necessary preparations in place to discover for herself the joys of literacy; for every aspect of oral language contributes to the child’s growing understanding of words and her ability to use and understand written text. (Wolf, 2007, p. 85)

Introduction to Literacy
Literacy is the ability to read and write. Reading and writing are a cultural invention, a form of communication used in many cultures, but not all. The human tendency is for communication, not literacy. Our brains are not “pre-programmed” for reading and writing the way they are for spoken language, as evidenced by the very long time that human beings were living on earth in advanced civilizations prior to the invention of written language. However, “the combination of several innate capacities- adaptation, specialization, and for making new connections- has allowed our brains to make new pathways between the visual areas and those areas serving the cognitive and linguistic processes that are essential to written language.” (Wolf, 2007, p.14) Literacy is a cultural adaptation in which older structures of the brain- vision and language- connect up to learn a new skill.

Writing Before Reading
Both reading and writing involve the use of arbitrary visual symbols to represent the sounds in words. They both require an understanding of vocabulary, syntax, and semantics. However, the key difference between reading and writing is that writing is making one’s own thoughts visible, and reading is interpreting the thoughts of others. This is a subtle difference, one that we don’t often think about because as experienced language users, we have totally integrated the processes of writing and reading. But for children, who are still developing language, the difference is very significant. Writing is a process that begins with something that is already known. Writing is considerably easier than reading, which begins with the unknown. Writing is known in the linguistic

5 In The Secret of Childhood, “What They Showed Me,” Montessori tells the story of how the children, after the obstacles to development had been removed, spontaneously discovered writing, and later, reading.
world as “encoding,” and reading is known as “decoding.” With encoding, you make the code, and with decoding, you have to decipher the code.

When a child first writes the word cat, he begins with a mental picture of the object and says it to himself, activating speech and comprehension in the brain. “cat” Then he identifies the individual sounds, or phonemes, of the word. /c/ /a/ /t/. Last, he applies the visual symbol for each of the phonemes. “cat” He starts with something known and applies a symbol to it. But when a child decodes or reads a word, he begins without any knowledge of the concrete object. He starts with abstract symbols for something unknown. He begins by looking at the visual symbol /c/ and identifies the phoneme, then the symbol /a/, and then /t/. He combines those phonemes and his mind searches for meaning. Cat! (Herron, 2008) We can see how it is a simpler process to begin with what is already known.

Think back to how babies first learn to speak. They start with a known concept and apply a string of phonemes symbolically representing the concept. Kitty. More. The process of writing adds one additional step, a visual symbol representing the sound. The foundation for writing is speech, because by learning to speak, the brain is already wired to represent ideas with symbols, writing only adds the visual component to the system. Constructing words, writing, gives the child opportunity to practice linking the visual system to the oral language system. This helps the brain to organize the pathways needed for reading. “For most children, their first experiences with letters and words dictate how the brain establishes neural networks that may become habitual pathways as reading skills develop.” (Herron, 2008)

In Montessori education, the development of literacy builds on the child’s foundation of spoken language, and writing precedes reading. Keep in mind the power of the absorbent mind and the sensitive period for language. Before age six, the child joyfully and effortlessly absorbs the elements of his culture, and the sensitive periods urge him towards activities that fulfill his potential. For these reasons, Montessori found that “Written language can be acquired much more easily by children of four years than by those of six- the time at which compulsory education usually starts... Not only do they acquire it without pain or effort, but with great enthusiasm.” (Montessori, (1955) The Formation of Man, pp. 94-95, Kalakshetra, 1975) The child’s exploration of writing becomes a silent communication of his own thoughts, gradually developing in complexity as his mind becomes more accustomed to this new way of communicating.
Just as the child had to develop his oral motor muscles and coordinate them an idea in his mind before he could speak his first word, so too must the physical and mental organs for writing be developed before writing is possible. Montessori observed that two independent streams of preparation were necessary for writing: **the preparation of the mind**, and **the preparation of the hand**.

**Preparation of the Mind**

As we have indicated, all of the child’s spoken language experience prepares the child’s mind for writing. As Mario Montessori once said, “Being born is preparation for writing!”

Not only are the brain structures developed for language, the activities with social language, conversation, and vocabulary enrichment give the child increasing **confidence as a communicator**. The children learn they can express themselves accurately, and can listen to others and be listened to with respect and understanding. The children realize that they have ideas worth communicating, and their words have meaning and value. As I saw on a bumper sticker recently, “Every child’s a writer.”

Other activities, such as songs, rhymes, and little games give the children experience in manipulating the sounds in words, and **build phonological awareness**. ("I like to eat, eat, eat, apples and bananas, I like to eat, eat, eat, apples and bananas, I like to eat, eat, eat, apples and bananas, I like to eat, eat, eat, apples and bananas...") All children love to have stories read aloud, and this gives experience with **grammar and print awareness**, as well as the wonderful feeling of a fascinating story emerging through words.

Activities in Practical Life offer support for developing the **logical order and sequence** necessary for language. The children experience through increasingly complex activities that there is a logical order and sequence to steps, and that in our culture, the logical order progresses from left to right.

As we mentioned previously, two specific activities in language prepare the child’s mind for writing, the **sound game**, and the **sandpaper letters**. The sound game gives the child practice identifying and articulating the individual sounds that make up a word, building necessary phonological awareness. Sandpaper letters are a visual and tactile representation of the sounds in our language. Our sandpaper letters represent the individual phonemes as well as digraphs (when two letters together make one sound, eg. /ch/, /sh/, /th/)

These activities prepare the mind for writing before the hand is physically able to manipulate a writing instrument, so Montessori used a material called the **moveable alphabet** to give children the

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6 As recounted in a story told by Mary Redonis Loew in 2009 at the Montessori Institute Northwest.
opportunity to write before their hands were able. The moveable alphabet is a box of individual cut out letters of the alphabet. The children think of a word, identify the sounds of that word, and lay out the letters representing the sounds.

**Preparation of the Hand**

Parallel to these activities, the child is also preparing his hand for writing. Early activities in Practical Life offer the child opportunities for refining the movements of the hand and wrist (manipulating a cotton ball, opening and closing containers, squeezing a dropper bottle) hand strength (scrubbing, carrying a pitcher of water, squeezing out a sponge) and visual-motor coordination.

In the Sensorial area, the materials indirectly prepare the child’s hand for lightness of touch (rough and smooth boards, touch tablets) firmness of touch (geometry cabinet) the pencil grip (lifting knobs) following a contour (with fingers-geometry cabinet, with an instrument- botany cabinet)

In the Language area, the sandpaper letters prepare the hand to follow the contour of a letter, and build that shape into the neural muscular memory, the metal insets build control of a pencil through geometric design, and activities with chalk offer practice forming letter shapes.

When the preparations of the mind and hand are integrated, the child is potentially ready to actually write. When these preparations are complete, “*writing comes as a natural consequence, an explosion of joyous activity.*” (Montessori, (1939) *Creative Development* Vol.2, p. 116, Kalakshetra, 1998)

**Authorship**

Our goal in writing is that the children achieve a degree of authorship; the child can take her own original thoughts and put them down in a written form for others to read. In our culture, authorship is not a luxury, it is an essential capacity that all children need. It is part of our heritage, a means of freedom of expression, an educational tool, and an expression of the human spirit. Authorship requires the mental and physical preparations for writing letters and words. The first plane of development, using the power of the absorbent mind and the sensitive period for language, is the ideal time for developing joyful, confident authorship.

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7 Montessori borrowed the idea of a moveable alphabet from Itard, who used it to try to help Victor learn to communicate.
Reading
The second aspect of literacy, reading, generally appears spontaneously about six months after we introduce writing with the moveable alphabet. (Lawrence, 2009) Many studies have shown that phonemic awareness (ability to identify sounds in words) and phonics (representing sounds with letters) are essential for skilled reading. (Herron, 2008) Additionally, other studies point to the fact that the organization of reading skills in the brain must be built on the foundations of speech. Because children speak a word and identify its sounds before they construct it with the moveable alphabet, they are linking the speech center of the brain with the visual center building a habitual pathway for reading. (Herron, 2008) Research has shown that the sight of a word triggers its pronunciation, which is stored in the memory along with the meaning of the word. (Ehri, 2002) It is the speech center of the brain, activated through pronunciation, which remembers the word, not the visual appearance alone. (However, some children do learn to read primarily by sight.)

It may come as a surprise to you that when children first write with the moveable alphabet; they are not able to read what they have written. This is because the pathways in the brain for reading are not yet mature. Spontaneous reading is possible only when the child's language centers in the brain are solidly developed through spoken language experience, and the visual centers of the brain have had enough experience with associating sounds with visual symbols through the moveable alphabet work. When children learn to read, these older systems in the brain, language and vision, have to work together to form the new brain circuitry necessary for reading. Once again, we revisit the layers of spoken language necessary to form the new skill of reading.

Phonemes – children learn to identify and understand the individual sounds that make up words. This is at the heart of decoding.

Morphemes – children learn that larger words are made of these little bits of meaning, how “ed” and “ly” change the meaning of the root word, so they can recognize longer words more quickly

Syntax – children understand the structure and order of words, which allows them to makes sense of how words construct sentences and enables them to learn how events in a story are related in a text

Semantics – children learn how the meanings of words are related to the context, which brings meaning to the decoding process more quickly

(Wolf, 2008, p.113)

The integration of these elements is necessary for reading, but there is one more essential piece. Learning to read begins the moment a baby first sits on her parent’s lap and listens to a story. The
association of warmth, security, and love that comes from snuggling up with Gramma, to the magic of a story that leaps out from those little squiggles has a profound impact on the older child’s feelings about learning to read. “Decade after decade of research shows that the amount of time a child spends listening to parents and other loved one read is a good predictor of the level of reading attained years later. Why? Consider this scene: a very young child is sitting, looking at colorful pictures, listening to ancient tales and new stories, learning gradually that the lines on the page make letters, letters make words, words make stories, and stories can be read over and over again. This early scene contains most of the precursors crucial to the child’s development of reading.” (Wolf, 2008, p. 82)

This is the social and emotional component of reading. It is this that connects us to our humanity and resonates so deeply within the child. When we read aloud to the children in our classroom we are offering them something precious, out of love and respect for them. When we introduce activities for reading, we must again come from this same place- the thrill of shared communication, the mystery, and the satisfaction of reading that will soon be theirs for always.

Activities for Reading
When we see that a child is getting very comfortable with the moveable alphabet associating the written symbol with its sound, we begin to introduce activities specifically for reading. Reading, unlike writing, is not self-expression. Reading is the process of reconstructing the thoughts and ideas of others, who “talk to us in silence.” We begin very simply, building on what the child already knows, so that the experience is a joyful one and the child is immediately successful. With a handful of familiar objects- phonetic, and of only one or two syllables- we invite the child to “read our mind” and know just which object we are thinking of just by looking at a small slip of paper on which we wrote the name. From the very start, meaning is attached to reading a word, and reading comprehension is built right into every activity.

From this point, reading parallels the development of spoken language, naturally moving from single word reading, to short phrases, and then to sentences. Everything the child reads includes an action or matching to an object. In the Casa, the child does not read to learn new information, he reads to confirm what he already knows. We offer activities in reading classification, which link reading to the enrichment of vocabulary we did with spoken language. We give the children a systematic exploration of the function and order of words through reading short phrases that mirror the grammar that the child already uses in speech. Much later, we give longer sentences that require
the child to not only read the words but to interpret the meaning of the author. \footnote{See Creative Development in the Child, Vol. 2, Chapter 16, pages 121-126, for an excellent description of reading activities, and the entire chapter for discussion of language.} “The exploration of the language which is already acquired when the child faces it consciously is carried out by means of attractive, practical exercises linked up with reading.” (Montessori, (1955), The Formation of Man, p. 114, Kalakshetra, 1975)

While our approach to reading is based on phonics, it is not too long before the child realizes that the English language contains a rich heritage resulting in many words that are not strictly phonetic. For this reason, we bring in other strategies as well. Puzzle words, or sight words, are introduced with three period lessons. Children explore alternate spellings of key sounds through games and activities that focus their attention on just these interesting and unusual varieties. It can be hilarious to first plane children that bakers bake but grocers don’t “groce,” and that the plural of goose is geese, but the plural of moose isn’t “meese.” It is this type of fun that we want to keep alive in the exploration of language, not bog the children down in dry lessons in spelling and grammar.

Our goal is not to teach reading, but to use reading as yet another way to explore our language. In this way, the layers of language fold back on one another, adding depth and richness to the child’s ability to communicate through spoken and written means. Our aim is to bring every child in the Casa to “total reading.” Total reading is a term used by Dr. Montessori to describe the combination of reading comprehension, interpretation of emotional content, and appreciation of individual style. With total reading comes the ability to use reading as a tool for intellectual independence and to receive the maximum pleasure from the printed word. Total reading is the fusion of the analytical and emotional- of falling in love with certain styles of writing. A great example of this comes from two former students of mine, seven year-olds Anna and Emma, who loved Shakespearean language and only wanted to write in an “old-fashioned” style. They made a dictionary of old-fashioned words for themselves, and their stories, poetry, and even their reports were all written in this particular style, peppered with the “old words” they loved.

We must feel for words what these children feel. Let ourselves be moved by words. Let words give a delicacy of expression to our thoughts and feelings. Only then, from this place, can we do justice to the child. Mario Montessori told the students in London, “Before daring to go in front of a child to “teach him language,” we ourselves must feel for language what should be felt. For every word is a monument to some soul that has gained strength through agony or happiness, who has broken the silence, created a word which will pass from generation to generation as long as the soul and intelligence lasts.” (Mario Montessori, London Lecture #17, p. 65, 1946)
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