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# Learning Language in the Womb of the Family

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> *"Unless you turn and become like children, you will not enter the kingdom of heaven" (Mt. 18:3)*

Children seem to naturally encounter and relate to the world with an affection that reflects the Creator's. "Behold it was very good" (Gen 1:31). Can the way children learn teach us an epistemology of love?

Swiss zoologist Adolf Portmann and educator Maria Montessori[1] both refer to the first year of human life as a kind of second year of pregnancy, taking place in the womb of the family, the "social uterus."

It is within this social setting that the infant achieves three major accomplishments his first year: upright posture, language, and the development of thought.[2] None of these can be learned well in the mother's womb. Human interaction is so essential that most feral children, who have been raised by animals and later rescued by humans, never learn language or upright posture. In this article we wish to consider the astonishing achievement of learning a language.

Many evolutionary biologists assume that human speech developed from lower animals' sounds. They try to trace the transformations necessary in mouths, tongues, and larynges that make human speech possible. They fail to recognize the essential difference between animal sounds and human language. Human words are manmade *signs*. They mean something. They represent the natures of things. We use them in combinations to communicate to others what we see, understand, desire, fear, or wonder about.

Animal sounds like lion roars and bird courtship calls express the inner states of the animals and these "communications" and responses to them are unique to a species and develop spontaneously by nature. Humans, on the other hand, do not have a ready-made language that develops by nature. They must learn it by their own intense effort.

## I. Phases in Language Development

Infants already begin learning their native language in the womb. They recognize their mother's voice, their native language, and even nursery rhymes that they have heard in the womb.

> Processing the speech stream begins before birth, as soon as the auditory system becomes functional at approximately 25 weeks gestation. Neonates … can also already distinguish: 1) the sounds of their mother's native language from the sounds of other languages, 2) their mother's voice from the voice of other adults speaking the same language, and 3) speech content that is familiar (e.g., a nursery rhyme recited by their mother) from similar, but unfamiliar content.[3]

One experiment establishing the native language preference learned in the womb took place with forty

French four-day-old infants. They were played tapes of French or Russian while sucking a pacifier after a baseline of no sound. The infants became more animated and sucked more vigorously when they heard the French. Infants displayed no difference in activity when they were exposed to two foreign languages.[4]

Another experiment involved 28 mothers reciting the same poem to their babies between the 33rd and 37th week of gestation. The babies were then played tapes of the poem and of another poem they had never heard. The known poem resulted in lower fetal heart rate, whereas the unknown poem had no effect on heart rate. This suggests that the babies could distinguish between the poems and found listening to the one their mother had recited calming. [5]

After birth, children not only have to learn to recognize and make the specific sounds of their native language (phonology), they also need to learn the meanings of words (semantics), as well as the typical arrangement of words in a sentence of their native language (syntax). All of this happens within the community of parent or caregiver and baby in the first year.

> The first year of life is a crucial period for infants and their caregivers to coconstruct a communication foundation using gaze, vocalizations, and gestures in dynamic interactions. Language learning occurs in the context of infants' communicative interactions and the quality of these interactions strongly predicts later language abilities.[6]

By the third or fourth month, infants begin to use their mouth to make many different sounds. They begin to babble. By the ninth month, they can produce all the sounds necessary for speaking in any human language. As they learn their native language, they will drop many of these sounds from their "vocabulary." They will have to relearn how to make these sounds if they wish to learn a foreign language.[7]

By the sixth month, before babies speak their first word, they already recognize a number of words signifying persons and objects like "mama" or "banana."[8] They understand words that name the parts of the body.[9] They distinguish nonlinguistic sounds like coughing from meaningful words. The growth of infants' word vocabulary is strongly bound to the amount of time their mother or father spends talking to them.

> Infants differ substantially in their rates of language growth, and slow growth predicts later academic difficulties. In this study, we explored how the amount of speech directed to infants influenced the development of children's skill in real-time language processing and vocabulary learning. All-day recordings of parent-infant interactions at home revealed striking variability among families in how much speech caregivers addressed to their child. Infants who experienced more child-directed speech became more efficient in processing familiar words in real time and had larger expressive vocabularies by the age of 24 months.[10]

By the ninth or tenth month, infants begin to imitate words and inflection patterns from the people around them. This is a long and intense process, lasting years. The imitations are very weak to begin with. Children clearly understand the meaning of many words before they can say them. They passionately desire to communicate and can become frustrated when adults fail to understand them.[11]

At the same time that he learns the sound of his native language and the meaning of its words, the infant also learns its syntax or language pattern. English speakers, for instance, must learn that adjectives usually precede nouns; by contrast, Spanish speakers learn that adjectives follow nouns.

Already at two months, babies can recognize such word order patterns.[12] At nine months, babies were found to listen longer to sentences where a pause in speaking was made between the subject/noun and predicate rather than to sentences where the pause was not connected to the grammatical structure.

> The actual acquisition of speech—which follows the production of sound toward the end of the early postnatal period—is the imitative adoption of a complete, preexisting social apparatus, a process that is deeply intertwined with the child's life as a social being and continues for a long time with great intensity.[13]

An average human child has a vocabulary of a thousand words at the age of three often without much special effort on the parents' part.[14] At three, children are intensely curious about the world around them. Language is far more for them than an activity useful for acquiring things. They are constantly asking questions, describing things, making up stories, communicating and receiving love, and even wondering about the Creator. This rich and varied use of language is distinctively human. In this vein, Portmann comments on the difference between human language and animal communication.

> No one underestimates the wealth of animalian means of communication, as revealed by behavioral research.... Nowhere, however, do we find the possibility for using a word as a "sign," freely disposable, independent of a particular situation.[15]

## II. Ordinary Language and Common Conceptions

The Thomist philosopher Duane Berquist used to say, "Unless you become like a little child, you shall not enter the Kingdom of Philosophy." The things children learn in their first years of life contain the seeds of all human knowledge. They are the common conceptions of ordinary language which represent reality as we meet it in our daily life.

In an article on "The Three Sources of Philosophy," Charles De Koninck says that the common conceptions are "the first inescapable source of philosophy"[16] because our intellects depend on the things understood for knowledge. These first conceptions are what babies first grasp as they learn to name things in their native language. Words symbolize the common natures of the things around them, as children understand them. De Koninck reflects on the certitude of these first common conceptions.

> There is a direct proportion between the inescapable certitude of the things most commonly known and the difficulty of describing or defining them. Yet, if we did not have such preexistent knowledge, we would ask no question about anything, nor would we communicate with one another except by sniffs and grunts.[17]

Common conceptions are not preexistent in us at birth as fully formed concepts and propositions, but "by an inclination of nature that is prior to any deliberate and constructive endeavor to learn."[18] My eighteen-month-old granddaughter just said her first three-word sentence, "Oh, Mama, dog!" She will learn much about dogs and their instincts and varieties as she grows up, but she will never lose that first grasp of what a dog is.

As soon as we can grasp what a whole is and what a part is, we understand "A whole is greater than a part." No reasoning is necessary or even possible here because there is nothing prior to reason from. This grasp of common conceptions of natures, of what things are, though understood only partially, and the first principles of reason are part of the "equipment" of human nature. They make it possible to proceed from such partial knowledge to the more complete and precise knowledge of philosophy or science.

A great danger in philosophy and science is to cut oneself off from the first common conceptions. Philosophical systems, like Kant's or Hegel's start from words. defined very formally, which already depend on much elaborate philosophical reasoning. [19] Even Aristotle or St. Thomas can become a system if one takes their definitions as the starting points and forgets to keep looking at the object of the definition. When one begins with "prime matter" and "substantial form" instead of with green apples turning red, one begins to demonstrate inside a system instead of deepening one's grasp of reality.

Scientists risk this danger when they take the symbol for the thing itself. De Koninck warns, "If we substituted time, as the physicist defined it, for the time seized by our common conception there would be no time left: no past, no present, no future."[20] A definition of time attributed to many physicists including Albert Einstein and Donald Ivey is "what clocks measure." The admittedly mysterious being of time is reduced to a measurement that can be represented by a *t*. Since one can manipulate algebraic symbols like *t* in any way one wishes, physicists do not flinch from having negative time or time that slows down or speeds up. What this could mean in light of time as we actually know it, measuring our lives from past to present to future, is not thought through.

## III. Children Understand the Unity of Knowledge and Love

Children affirm and rejoice in all they encounter. They are fascinated by nature guides because they love to learn the name of everything they observe. My grandsons used to love to catch the orange and brown lizards in our Florida lanai with a little net, put them in a clear plastic box, and watch them with intense interest. Now they have graduated to catching grey rats and even occasional corn snakes to their grandmother's discomfort. Children like all weather: rain, snow, or sun. It is all exciting, unless it prevents them from going outside. Taking a walk with a small child can be very annoying for an adult because they constantly stop and look, picking up anything of interest: every leaf, stone, stick, insect, or animal is cause for attention and wonder. Luigi Giussani calls this curiosity, "an open disposition, full of positive affirmation, nothing other than an original sympathy with being, with reality."[21] However, this curiosity can be so easily lost.

Growing up often means growing more practical, focused, and utilitarian. We no longer even see much that surrounds us. It takes a special effort to notice the purple finches in the oak tree outside my study window, the sunlight gleaming on the upper twigs, the wispy cirrus clouds high in the sky, or the dried brown leaves blowing around on the grass below the oak. Often all I see is my computer screen.

The current trend of keeping a nature journal is a marvelous remedy for this "forgetfulness of being." It is a pedagogical tool to teach us to become like children, attentive again to all that surrounds us in nature. It is a taking in without devouring, a becoming richer without impoverishing another. It teaches us to love what we know.

## IV. Recovering the Unity of Knowledge and Love

In a recent article in *First Things*, N.T. Wright speaks of "an epistemology of love."

> It requires taking creation seriously, which for the Christian means *receiving* creation as what it is, the gift of love from the good and wise creator. Our delighted, sensitive, respectful, and curious exploration of creation is the response of love to the love we have received.[22]

This is far from our rationalistic culture's idea of how to seek objective knowledge. No feelings or values should interfere with reason. Luigi Giussani critiques this position by pointing out an absurd conclusion. As soon as a person becomes passionately interested in any question or subject, he is no longer capable of achieving objective knowledge about it. Giussani suggests an image to show the opposite is true. Our interest in a subject is like a lens that brings the object closer to our mind so that

we can know it better.[23]

Even in natural science, our affection can lead to deeper knowledge. It can open us to investigating new kinds of questions. It can lead to studying the thousands of patterns of snowflakes, the elaborate arrangement of colors and forms in a peacock's tail, or the mating flights of dragon flies because they are beautiful.

In *The Abolition of Man*, C.S. Lewis calls for "a new Natural Philosophy." He compares the goal of science of earlier ages, "to conform the soul to reality,"[24] to that of contemporary science, "to subdue reality to the wishes of men."[25] Francis Bacon and Descartes set out modernity's program of pursuing knowledge useful to man, and its success has been prodigious. Most scientists work within a materialistic framework that regards questions about goodness, beauty, meaning, forms and purposes as nonsensical. C.S. Lewis compares our Model of the Universe to a stencil. "It determines how much of that total truth will appear and what pattern it will suggest."[26] The stencil principally allows measurements of quantities and quantitative relationships to appear. Every phenomenon must finally be reduced to forces and the arrangement and motions of particles so that the phenomenon can eventually be controlled and manipulated for the comfort and pleasure of man.[27]

Children are not interested in measurement. They do not want to control the world but to explore it and enjoy each thing's unique properties. They can help us recover an epistemology of love that seeks to understand and delight in the word spoken into each creature that gives it its qualitative richness.

Wonder is awe before reality with a longing to penetrate it more deeply and savor it with admiration. The child can teach us wonder, because he takes in what is offered without presuppositions that restrict what he sees or prevent him from following the given or the sign to its Source. He learns with joy; he is attached to the reality he discovers. It molds his soul. Guissani thus comments on Jesus's words that tell us to "become like little children" (Mt 18:3):

> He was not holding up childishness as an ideal, but instead the openness of soul that nature automatically grants children, because it is such a necessary condition for the development of the human; like every value, in the adult it is achieved with difficulty.[28]

This openness of soul is what makes us human, rational animals. The child's astonishing work in the acquisition of language flows from a thirst for union with being in knowledge. It is the embodiment of "the epistemology of love."

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[1] Maria Montessori, *The Absorbent Mind*, 4th ed., trans. Claude A. Claremont (Madras, India: The Theosophical Publishing House, 1963), 61: "Man seems to have two embryonic periods. One is pre-natal, like that of the animals; the other is post-natal and only man has this."

[2] Adolf Portmann, *A Zoologist Looks at Humankind*, trans. Judith Schaeffer (New York: Columbia University Press, 1990), 19–62. Hereafter cited as Portmann (1990).

[3] D. Levine, K. Storther-Garcia et al., "Language Development in the First Year of Life: What Deaf Children Might Be Missing Before Cochlear Implantation," *Otology and Neurotology* 37, no. 32 (February 2016): 56–62.

[4] Jacques Mehler, Peter Jusczyk et al., *Cognition* 29 (1988): 143–78.

[5]A. DeCasper, J. Lecanuet, M. Budnel et al., “Fetal Reactions to Recurrent Maternal Speech,” *Infant Behavior and Development* 7 (1994): 49–63, at 57.

[6] Levine (2016), 57.

[7] Portmann (1990), 88.

[8] Levine (2016), 57.

[9] Ruth Tincoff and Peter Jusczyk, “Six-month-olds comprehend words that refer to parts of the body,” *Infancy* 17 (2011): 432–44.

[10] A. Weisleder and A. Fernald, “Talking to Children Matters: Early Language Experience Strengthens Processing and Builds Vocabulary,” *Psychological Science* 24, no. 11 (November 1, 2013): 2143–52.

[11] Portmann (1990), 88.

[12] D. Mandel, D. Kemler, D. Nelson, P. Jusczyk, “Infants Remember the Order of Words in a Spoken Language,” *Cognitive Development* 11 (1996): 181–96.

[13] Portmann (1990), 88.

[14] Robert Agros and George N. Stanciu, *The New Biology* (Boston: New York Science Library, 1987), 81.

[15] Portmann (1990), 89.

[16] Charles De Koninck, “The Three Sources of Philosophy,” *Proceedings of the American Catholic Philosophical Association* 38 (1964): 13–22, at 18.

[17] Ibid., 14–15.

[18] Ibid., 13.

[19] Ibid., 16.

[20] De Koninck, 16.

[21] Luigi Giussani, *The Religious Sense*, trans. John Zucchi (Montreal & Kingston: McGill-Queen’s University Press, 1997), 127.

[22] N.T. Wright, “Loving to Know,” *First Things* 300 (February 2020), 25–34.

[23] Ibid., 26–28.

[24] C.S. Lewis, *The Abolition of Man* (New York: Harper Collins Publishers, 1971), 77.

[25] Ibid., 77.

[26] C.S. Lewis, *The Discarded Image* (Cambridge: Cambridge University Press, 2013), 223.

[27] Measurement can, of course, be a necessary and helpful method of learning about nature; it just cannot be the only way.

[28] Luigi Giussani, *Il Senso di Dio e l'uomo moderno* (Milan: Bur, 2010), 28.