

Visual Thinking and Montessori Part II: *The Theory and Practice of Aesthetic Development*

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Forthcoming in *Montessori International*

Within a Montessori context, nurturing creativity is of central importance. For many outsiders, however, Dr. Montessori's approach to creativity is counter-intuitive. Like other core pedagogical concepts—freedom, order, respect, and work—Montessori's take on nurturing the creative capacity in children was, and still is, grounded in a very specific understanding of human development.

In a Montessori classroom, development (emotional, social, cognitive, physical) is a holistic enterprise. It occurs in stages, or planes, and it can either be supported or obstructed by the environment that surrounds a child. Creativity is a natural impulse in all humans; stemming from both a universal tendency to express thoughts and feelings and a fundamental need to construct meaning out of our life and surroundings.

But how is creativity nurtured? More specifically, how do the specific practices of the Montessori prepared environment enable the development of creative capacities?

We have been struck by how insights uncovered by those developing and using Visual Thinking Strategies, a more recent approach to developing creative thinking in classrooms, are compatible with views of Dr. Montessori. Exploring the theory behind Visual Thinking Strategies, along with its affinity to Montessori developmental and pedagogical theory, helps illuminate both the how and why of creativity in a Montessori setting.

Sense Training and Creativity: Imagination is grounded in perception

One of the first things new visitors often notice about Montessori classrooms is their order. Second is the quiet, intense focus of the children. The youngest children are often focused on the sensorial materials, which are meant to be explored in a particular way and in a particular sequence.

The Brown Stair, for instance, is not to be used as a pretend train. Rather, its purpose is to enable the child to develop the ability to classify three-dimensional objects and to refine perceptual discrimination. In so doing, the child learns to appreciate the formal elements of object and, in the words of Dr. Montessori, “train himself to observe.”



A three-year-old working with the Brown Stair

Indeed, all of the sensorial materials are designed to assist the child in refining her perceptive capacities. They also are supporting her ability to concentrate while honoring her need to bring order and structure to her rapidly expanding cognitive skills. Sense training sets the stage for

deeper intellectual work. As children enter the second plane of development, where abstraction moves to the fore, sensorial skills serve as cognitive tools, enabling complex, creative, and critical thinking. Imagination, in other words, is grounded in perception – not in fantasy or other departures from reality, but in the real stuff of living.

Maria Montessori makes no significant distinction between creativity and other types of cognitive activity. Learning to look (or listen, taste, smell, or touch), in other words, is pretty much the same as learning to think.

“The senses, being explorers of the world, open the way to knowledge . . . Simultaneously, everything appertaining to the child’s higher energies becomes a stimulus, setting his creative powers to work and extending the interests of the exploring mind.” (See *The Absorbent Mind*, especially the chapter, “Further Elaboration Through Culture and Imagination.”)

In this way, Montessori’s theory of human development both overlaps with and foreshadows in profound ways the theory of aesthetic development articulated in Visual Thinking Strategies.

Rudolf Arnheim (1902-2007), the German Gestalt psychologist, coined the term “visual thinking” and argued that perception was so central to cognition that there is, functionally, no difference between looking and thinking. “Perception makes it possible to structure reality,” he wrote “and thus to attain knowledge.” Art, he further argued, “is a means of perception, a means of cognition . . . Art reveals to us the essence of things, the essence of our existence. That is its function.” (Arnheim interview, 2001, <http://www.cabinetmagazine.org/issues/2/rudolfarnheim.php>)

Looking, in other words, shapes thinking; and art—a universal means of constructing meaning—not only expresses our deepest thoughts and feelings, it enables us to organize those thoughts and feelings in ways that transcend language.

Planes and Stages

Visual Thinking Strategies (VTS) takes its name from Arnheim’s work, and is built, in part, on his view that (1) art is perception and (2) perception is thinking. VTS Co-Founder Abigail Housen grounded her own theory of aesthetic development in Arnheim’s earlier psychological and philosophical ideas, but went further. Where Arnheim was interested in describing a process of viewing, Housen wanted to learn how people make sense of art. More specifically, she wanted to know what people think about when they look at art, and what, if anything, causes people to grow as art viewers.

What she learned was that aesthetic development is both intricately linked to human development in general and somewhat separate as a process. That is, like general human development, which takes place in phases or planes, aesthetic development also occurs in successive stages. Those stages, however, are not linked to chronological age or even education level. Rather they are the result of a viewer’s experience with looking at and thinking about art.

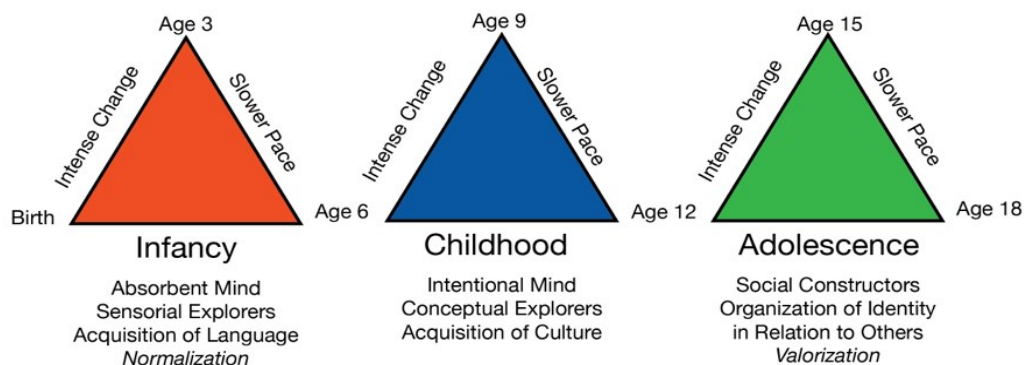
Neither is Aesthetic development linked to intelligence. In fact, many of the subjects of Housen’s early research were college-educated visitors to places like the Museum of Modern

Art in New York and the Museum of Fine Arts, in Boston¹. And most of those visitors were stage 1 or 2.

Stage	Stage characteristics
Stage 1 <i>Accountive</i>	Storytellers —memories and personal associations and concrete observations are woven into a narrative. Judgment based on the familiar and preference; emotions affect interpretation.
Stage 2 <i>Constructive</i>	Building a framework , using personal perceptions, knowledge, and values. Judgment is negative if something doesn't look like it is supposed to (i.e. realistic). Distance themselves emotionally with art object
Stage 3 <i>Classifying</i>	Art historian—interest in identifying artist, place, style, time, provenance, etc.; Make sense of the work using a library of facts; with proper categorization, meaning can be rationalized
Stage 4 <i>Interpretative</i>	Seeking a personal encounter with the work; lets the meaning slowly unfold. Multiple meanings and interpretations exist; awareness of their process of making meaning.
Stage 5 <i>Re-creative</i>	Long history of viewing; familiarity—returns to a work over and over again. Understands the complexity of the work (its history, contexts, intricacies); works of art as complex things that should be visited and revisited. Combination of the personal and the universal

As a result, VTS is designed for beginning viewers. Its aim is not to accelerate aesthetic growth. Like Dr. Montessori, Housen regards each stage as necessary and valuable on its own terms. Rather the aim is to enable viewers to fully experience each stage and to cultivate the qualities of aesthetic thinking that allow us to contemplate and express the deepest meanings of our existence. To put it in Montessori terms, aesthetic development is central to what lies at the core of the purpose of all education: to appreciate both the order and the challenges of a vast universe; to live intentionally, equipped to confront and resolve problems, conflicts and puzzles of all kinds; and to discern one's cosmic task.

To further make the Montessori connection, first plane aesthetic development begins as sense training. As the child moves into the second and third planes of development, cognitive work of perception matures into critical and creative thinking.



Three of Montessori's Four Planes of Development

Maria Montessori was the first to articulate a staged theory of human development, and recent research on brain development supports her view of the first plane child as a sensorial explorer. It turns out that brain development starts in the parietal lobe (where vision is located), that by the age of six 95% of brain development is completed. During the second and third planes of development the frontal lobes (which are responsible for higher order thinking) continue to develop while, at the same time, a pruning process takes place, which organizes the brain's connections based on the stimuli it receives during this period.

Visual Thinking Strategies aims to capitalize on this developmental process by stimulating perception as well as higher order processes such as analysis, inference, interpretation, and evaluation. Similar to Montessori practice, a larger goal is to create socially developed children who both learn and teach one another. In promoting and increasing observation skills, reasoning, and speculative abilities through use of the senses, VTS accomplishes this learning goal. The affinity with Montessori pedagogy makes it a good fit in a Montessori classroom, and, not surprisingly, VTS is finding its way into Montessori schools in both North America and Europe.

Further Reading:

Rudolf Arnheim, *Visual Thinking*, 1969

Abigail Housen, *The Eye of the Beholder*, 2001

ⁱ For more on Housen's research findings, see: Housen, A. (1983). "The Eye of the Beholder: