MarianthiLiapi2

[01]. In the Foreword to Mindstorms, Papert talks about his childhood fascination with gears. Describe an object from your childhood, and explain why it was important to you (then and later).

My childhood fascination was **Rubik's cube***. It was love at first sight. The perfect game that offered me hours and hours of mental exercise (it was actually 'playing' for me back then), with colors and motion, not to mention the rewarding feeling of accomplishment in the end. My interaction with Rubik's Cube played a significant role in my decision to become an architect. I was fascinated by its structural logic, its ever-changing surfaces and the mystery around the hidden space inside it, in which I though that the solution of the puzzle was hiding. The perfect geometry of the object planted the "seeds" of Euclidean space in my mind, but also spread out some "germs" of perfectionism, that still give me a hard time. In Papert's words, Rubik's cube is my transitional object. It represents for me the epitome of logic and structure. Moreover, when I hold it in my hands I see the duality of chaotic order and ordered chaos in it. This childhood fascination is my tool for thought. As Nietzsche mentioned, pure creativity emerges from chaos.

*This mechanical puzzle was created in 1974 by the Hungarian architect Erno Rubik. "It is a cubic block with its surface subdivided so that each face consists of nine squares. Each face can be rotated, giving the appearance of an entire slice of the block rotating upon itself. This gives the impression that the cube is made up of 27 smaller cubes (3 x 3 x 3). In its original state each side of the Rubik's Cube is a different color, but the rotation of each face allows the smaller cubes to be rearranged in many different ways. The challenge is to return the Cube from any state to its original state, in which each face consists of nine squares of a single colour."
[*http://www.wordiq.com/definition/Rubik's_cube#Description*]

[02]. What idea (or passage) in Mindstorms was most provocative, intriguing, or surprising for you?

What I value greatly in Mindstorms is the ability of the writer to convey messages successfully, through the use of metaphors. The metaphor system can be described as a network of mappings across conceptual domains. Each mapping is a fixed set of parallelisms between entities in the familiar (source) domain and entities in the unfamiliar (target) domain. Papert knows how to trigger people's cognitive abilities. In his narrative, he engages the metaphor tool knowing that everybody will be in a position to comprehend him:
- the gears as an object-to-think

- the mathland metaphor

- the metaphor of imitating the way a child learns

- the use of the computer as a carrier of "germs" and "seeds"

- teaching the turtle a new word as a metaphor for programming

This last image of children programming with the same ease as they learn a foreign language is Papert's biggest success. I loved his passion to fight the spatial restrictions of teaching by introducing the computer as the means that will carry the learning environment beyond the school walls. I, too, strongly believe in the idea of rendering the computer an "educational automobile". As Marshall **McLuhan** said, the "medium is the message" implying in this case that the message of the computer is the huge change that it introduces inside the learning domain. All we need is a welcoming social and cultural infrastructure.

[03]. Mindstorms was written nearly 25 years ago. Which ideas in the book stand the test of time? Which ones don't?

Papert's book has by all means stood the test of time. In my opinion part of this success is his modesty to acknowledge the fact that the computer is a powerful tool, yet not a panacea for every problem that surrounds us.

Powerful ideas picked-up randomly from the book:
- the potential of the computer to transform fundamentally the way people think, work, learn and communicate.

- assimilation as a powerful way to bring old knowledge to bear on a new object

- the "laws of learning" must be about how intellectual structures grow out of one another and about how, in the process, they acquire both logical and emotional form

- the mathophobia endemic in contemporary culture

- "objects-to-think-with": objects in which there is an intersection of cultural presence, embedded knowledge, and the possibility for personal identification

- computers as educational automobiles