

renowned scholar in fields as diverse as electrical engineering, computer science, semiotics, and human-computer interaction, Dr. Mihai Nadin, since 1985, has devoted his research to anticipation, i.e., anticipatory processes that define the living, and how they relate to creativity. He maintains that creative acts are driven by future possibilities. To create something that never existed before cannot be based on reaction. Even a downhill skier or a tennis champion is creative; in returning a very fast serve (and no two serves are ever the same), the player anticipates where the ball is heading.

Dr. Nadin is interested in the individual and society, and how the two can support creative processes. Based on his experiences under communism (but also with consumer society), Dr. Nadin is convinced that heavy regulation or control hinders

the flow of creative expression. To facilitate as many choices as possible can be a great stimulus for everyone, whether in education, sports, business or self-expression.

In his much acclaimed 1997 book "The Civilization of Illiteracy," Nadin describes how a society of one dominant literacy has progressed towards one of many literacies. The new "languages" are more effective because they are more expressive. The languages of rhythm, of color, of texture, of movement together with those of programming make possible new forms of creativity. Literature and verbal communication will continue to rely on "natural" language, but new "literacies" will continuously emerge, some through new form of artistic expression. The science of sounds and sonification (the use of non-speech audio to convey information) is one of them.

## [Computers are] by far not as good as a CREATIVE human being.

- Mihai Nadin

S emiotics is concerned with everything we use to express ourselves. Of course, creativity is semiotically expressed: through sounds and images, or through the symbols of mathematics. Knowledge of semiotics led him to study the works of Brancusi, the famous Romanian sculptor, and other artists engaged in creative acts (theater, dance, painting, music, literature, etc.).

Having worked in this field all his life, Dr. Nadin remains firm in his belief that computers—as spectacular as the development of digital technology might be—are by "far not as good as a creative human being." Computers and their programming languages are the intermediary, the "agent" through which feelings, emotions, thoughts and ideas are expressed. Computers support human creativity in ways never before considered possible.

Born in 1938 in the medieval city of Brasov, Romania, Mihai Nadin lived (and survived) through the Nazi terror of World War II. Two memories from this time left a lasting impression: during machine-gun fire from airplanes bombing the city, his mother shielded him with her own body as people ran to the wooded hills for shelter. He stayed in the

ran over him. There is no bitterness in his voice as he recalls this incident: "There is no person who I met in those days, absolutely none, regardless of their religion or who they were—men, women, old, young—who wouldn't try their best to give me a chance."

hospital for a year after a German military truck

He grew up in a city
with people from diverse
backgrounds and identities:
Romanian, Hungarian,
German, Bessarabian, Polish,
some Christian, some Jewish,
professionals, peasants, teachers,
workers, ideologues, artists... At a
very early age he believed in human
diversity and the expression of
individuality. He grew-up fascinated by
the uniqueness and diversity of every
human being. The many different

forms of creativity, expressed in dancing, singing, writing and reciting poetry, became part of him.

After finishing high school, and still spurred by a desire to understand creativity, he studied engineering and computer science at Bucharest Polytechnic. One of his mentors, a leading mathematician confused by Nadin's "crazy" idea, got him access to the computing center of the University. Nadin began to learn how to create images with the computer at a time when studying computer sciences and working with computers was revolutionary and regarded with suspicion.

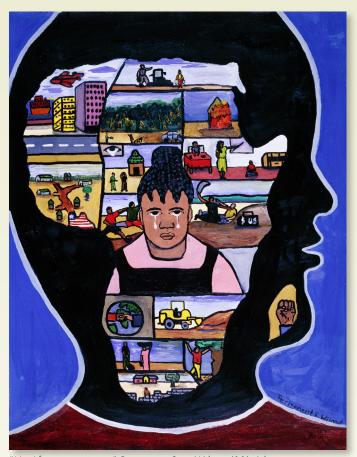
Dr. Nadin has authored more than 250 publications. He holds a post-doctoral degree in Philosophy, Logic, and the Theory of Science from the University of Munich. Since 2004, he has been the director of the Institute for Research in Anticipatory Systems at the University of Texas, Dallas. Most of his work has focused on human creativity, how to discern and analyze it and how to inspire others to be creative. He maintains that anticipation, the main subject of his research, drives creativity.

His advice to *ChildArt's* young readers is to follow their own instincts, to believe that each is unique, to embrace difference, and to pursue their individual creativity. Sameness destroys creativity. Even though it is important to seek interaction with others, interaction should never result in conformity but in defining your own path. In the words of the great American poet Robert Frost: "Two paths diverged in a wood, and I took the one less travelled by, and that has made all the difference."

And his advice to grownups: "Stay a kid forever, try to stay as open, as genuinely interested in everything, and spontaneous as children are!"

By Martina Woebcken, ChildArt contributing editor and freelance writer.

## CHILDREN IMAGINING THE FUTURE Art from the ICAF Collection



"My Africa is crying..." Permanent Sam Wilmot (11), Liberia.



"Future is like an open book, for you to write." - Anna Langer (12), Germany.



"I hope that technological developments do not destroy or alter nature, with all its beauty and splendor... I want to show different kinds of people, of different races and characteristics, living and working together. ... I try to show an optimistic point of view, a world in which discrimination and destruction do not exist."

- Alejandro Goldzycher (9), Argentina.



"Because of pollution the buildings are bending down." - Masa Budimir (12), Croatia.



"As a girl and a female, I will become a woman and carry a child, giving him care and love. The bird represents peace, the pregnant mother represents the present, and the baby is the future peace. The flowers represent protection of the environment (past/present/future)."- Lotfieh Mohamed El Masri (11), Lebanon.



"My idea was to create an image that showed the end of violence between people and between nations – the end of all forms of violence. ... To show the transformation of the world into a place full of love and peace, there is nothing better than the shape of a heart." - Anna Carolina dos Santos Israel (12), Brazil.



"I want to see different cultures joining together to make peace throughout the world, I want to see kids reaching their goals and dreams in life, I want to see technology help us and not hurt our planet, and most of all I want to see kids getting the education they need and an equal chance in life." - Shellie Lee Korth (12), United States.