

Composite Materials, Augmented Reality

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Augmented reality is computerized technology that makes it possible to create a hybrid existence of sorts: a real-life framework supplemented with “external,” sometimes even fictitious components. The result is a super-reality that is packed, enhanced and focused – and capable, among other things, of improving the performance of pilots and surgeons. This architecture: a mold that is reinforced by its filling, also lies at the basis of advanced composite materials used, for instance, to manufacture sports equipment or satellite parts.

In her work as an artist, Dr. Ella Amitay Sadovsky, a graduate of the Weizmann Institute of Science in chemistry and materials science, relies on the principles applied to constructing composite materials. At first, she creates the background – the mold made of scraps of paper, fabric and strokes of paint. Into this mold, she injects the contents: the “story.” At first glance, the result might appear to be a series of almost trivial episodes: randomly frozen moments that could occur in the life of any regular person. Nothing to write home about. But in fact, this is a multi-temporal system, a sort of an on-line video waiting for viewer to click on the arrow at its center for it to be launched on a journey, the ending still unknown.

Amitay Sadovsky offers the observer, or “user,” the option of an augmented reality, veering between dream and nightmare, simplicity and complexity, yesterday and tomorrow, insight and wonder. It’s a roller-coaster ride of revelations, surprising insights and “urgent” messages that loudly bang on the gates of the amygdala, the part of the brain responsible, among its other functions, for emotion regulation. In the past, Amitay Sadovsky expressed her intent thus: “The uterus is a city. The city is a sea. There is a tree in the sea. The tree is a helicopter. The helicopter is a fish. The window is a painting. The floor is a puddle and the ceiling is a dress from the sixties.” The truth is, this roller-coaster ride can go on and on, but we soon get the idea.

What brings a scientist working on materials research (“the most utilitarian topic possible”) to switch to art, releasing her soul to romp wildly in the broad fields of the emotions? In her own way, Dr. Amitay Sadovsky, like many graduates of the Weizmann Institute of Science, simply continues to widen the limits of our understanding of the world we live in. If something unites the generations of Weizmann graduates, regardless of their fields of activity, it’s their readiness

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and willingness to live on the edge. To operate on the leading edge, creating new knowledge, making new statements, expressing original worldviews.

Deep down, the worlds of science and art share common values: the unceasing eagerness to examine new possibilities, perform experiments, risk failure and embark on repeated journeys into the unknown from which they attempt to wrest new insights, so that we can incorporate them into our lives.

But despite the intrinsic similarity between the two worlds and the two cultures, very few people manage to live in both simultaneously. In this respect, it seems that Dr. Amitay Sadovsky operates in an augmented reality of sorts – one that finds its expression in her works. For the time being, the question of which world is the “mold” and which is the “contents” remains an open one.