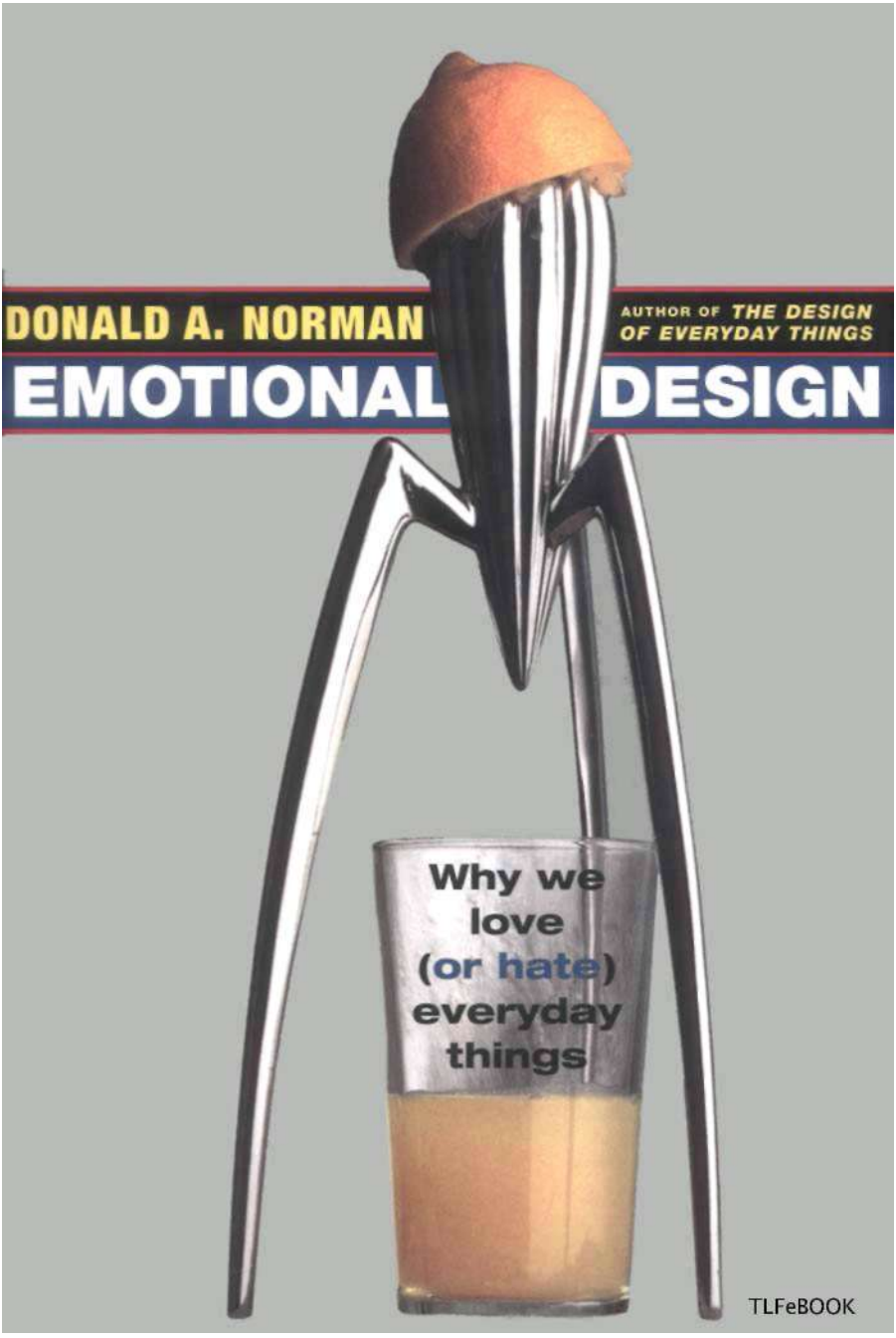
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EMOTIONAL DESIGN
Why we love (or hate) everyday things
TLFeBOOK

CHAPTER ONE

Attractive Things Work Better

NOAM TRACTINSKY, AN ISRAELI SCIENTIST, WAS puzzled. Attractive things certainly should be preferred over ugly ones, but why would they work better? Yet in the early 1990s, two Japanese researchers, Masaaki Kurosu and Kaori Kashimura, claimed just that. They studied different layouts of controls for ATMs, automated teller machines that allow us to perform simple banking tasks any time of the day or night. All versions of the ATMs were identical in function, the number of buttons, and how they operated, but some had the buttons and screens arranged attractively, the others unattractively. Surprise! The Japanese found that the attractive ones were perceived to be easier to use.

Tractinsky was suspicious. Maybe the experiment had flaws. Or perhaps the result could be true of Japanese, but certainly not of Israelis. "Clearly," said Tractinsky, "aesthetic preferences are culturally dependent." Moreover, he continued, "Japanese culture is

known for its aesthetic tradition," but Israelis? Nah, Israelis are action-oriented—they don't care about beauty. So Tractinsky redid the experiment. He got the ATM layouts from Kurosu and Kashimura, translated them from Japanese into Hebrew, and designed a new experiment, with rigorous methodological controls. Not only did he replicate the Japanese findings, but—contrary to his belief that usability and aesthetics "*were not expected to* correlate"—the results were stronger in Israel than in Japan. Tractinsky was so surprised that he put that phrase "*were not expected*" in italics, an unusual thing to do in a scientific paper, but appropriate, he felt, given the unexpected conclusion.

In the early 1900s, Herbert Read, who wrote numerous books on art and aesthetics, stated, "it requires a somewhat mystical theory of aesthetics to find any necessary connection between beauty and function," and that belief is still common today. How could aesthetics affect how easy something is to use? I had just started a research project examining the interaction of affect, behavior, and cognition, but Tractinsky's results bothered me—I couldn't explain them. Still, they were intriguing, and they supported my own personal experiences, some of which I described in the prologue. As I pondered the experimental results, I realized they fit with the new framework that my research collaborators and I were constructing as well as with new findings in the study of affect and emotion. Emotions, we now know, change the way the human mind solves problems—the emotional system changes how the cognitive system operates. So, if aesthetics would change our emotional state, that would explain the mystery. Let me explain.

Until recently, emotion was an ill-explored part of human psychology. Some people thought it an evolutionary leftover from our animal origins. Most thought of emotions as a problem to be overcome by rational, logical thinking. And most of the research focused upon negative emotions such as stress, fear, anxiety, and anger. Modern work has completely reversed this view. Science now knows that evolutionarily more advanced animals are more emotional than primitive

ones, the human being the most emotional of all. Moreover, emotions play a critical role in daily lives, helping assess situations as good or bad, safe or dangerous. As I discussed in the prologue, emotions aid in decision making. Positive emotions are as important as negative ones—positive emotions are critical to learning, curiosity, and creative thought, and today research is turning toward this dimension. One finding particularly intrigued me: The psychologist Alice Isen and her colleagues have shown that being happy broadens the thought processes and facilitates creative thinking. Isen discovered that when people were asked to solve difficult problems, ones that required unusual "out of the box" thinking, they did much better when they had just been given a small gift—not much of a gift, but enough to make them feel good. When you feel good, Isen discovered, you are better at brainstorming, at examining multiple alternatives. And it doesn't take much to make people feel good. All Isen had to do was ask people to watch a few minutes of a comedy film or receive a small bag of candy.

We have long known that when people are anxious they tend to narrow their thought processes, concentrating upon aspects directly relevant to a problem. This is a useful strategy in escaping from danger, but not in thinking of imaginative new approaches to a problem. Isen's results show that when people are relaxed and happy, their thought processes expand, becoming more creative, more imaginative.

These and related findings suggest the role of aesthetics in product design: attractive things make people feel good, which in turn makes them think more creatively. How does that make something easier to use? Simple, by making it easier for people to find solutions to the problems they encounter. With most products, if the first thing you try fails to produce the desired result, the most natural response is to try again, only with more effort. In today's world of computer-controlled products, doing the same operation over again is very unlikely to yield better results. The correct response is to look for alternative solutions. The tendency to repeat the same operation over again is especially likely for those who are anxious or tense. This state

of negative affect leads people to focus upon the problematic details, and if this strategy fails to provide a solution, they get even more tense, more anxious, and increase their concentration upon those troublesome details. Contrast this behavior with those who are in a positive emotional state, but encountering the same problem. These people are apt to look around for alternative approaches, which is very likely to lead to a satisfying end. Afterward, the tense and anxious people will complain about the difficulties whereas the relaxed, happy ones will probably not even remember them. In other words, happy people are more effective in finding alternative solutions and, as a result, are tolerant of minor difficulties. Herbert Read thought we wpuld need a mystical theory to connect beauty and function. Well, it took one hundred years, but today we have that theory, one based in biology, neuroscience, and psychology, not mysticism.

Human beings have evolved over millions of years to function effectively in the rich and complex environment of the world. Our perceptual systems, our limbs, the motor system—which means the control of all our muscles—everything has evolved to make us function better in the world. Affect, emotion, and cognition have also evolved to interact with and complement one another. Cognition interprets the world, leading to increased understanding and knowledge. Affect, which includes emotion, is a system of judging what's good or bad, safe or dangerous. It makes value judgments, the better to Survive.

The affective system also controls the muscles of the body and, through chemical neurotransmitters, changes how the brain functions. The muscle actions get us ready to respond, but they also serve as signals to others we encounter, which provides yet another powerful role of emotion as communication: our body posture and facial expression give others clues to our emotional state. Cognition and affect, understanding and evaluation—together they form a powerful team.