

Preface

When I was at high school, I was very much interested in philosophy, politics, and history, but I was too lazy to read all the necessary books required to sustain any sound discussion. There was too much material to learn by heart along with the hundreds of great citations that each prestigious contributor had made to those fields from the early stages of human culture, which cover a few thousand years. At odds with this, mathematics was much less demanding in terms of memory and reading, and to top it all, a really exciting game. Laziness, combined with the pleasure of resolving small challenges thus put me on the scientific highway of education without a clue of where it would take me. How could I know, or even figure it out?

Coming from a Jewish family expelled from Libya in the 1950s, my parents arrived in Paris without having ever met any academic in the whole of their lives, not to mention any physicist. My birth there was like a camel being put into a strange world of Martians. And sometimes, I thought that in addition, my family was from Venus. I was only instructed that to learn was the thing to do, something supposed to be much more promising than selling clothes in a little shop, at least according to Sion, my dear late father. He kept on pushing me into learning, with the irrefutable argument that I would understand later on why it was the right thing to do. Indeed, I discovered later than it is more fun to shop around looking for good bargains rather than trying to sell them. A wise man my father. And my adorable mother started calling me Professor Nimbus, due to some of my hair that pointed skywards. So, not yet being a contrarian, I kept on learning since after all it was not such a demanding thing to do, with the mathematics being quite transparent for me. It was, sometimes, even enjoyable.

I thus kept on studying one year after the other until I graduated in mathematics. But proving theorems began to fade away in front of my eyes. I started to feel a bit confined by the closed world of mathematics and at the same time I actually had to wear glasses for the first time in my life. Viewing all of a sudden the so many awful details of everything around me was a shock, which in turn made me switch to physics. Do not ask me why. It is called a chaotic bifurcation. Somehow, I thought that theoretical physics would bring me closer to the real world. I agree that this was quite a peculiar view of the real world.

Doing physics, I found the idea of playing formal games to question the laws that govern basic nature rather attractive. You can have fun playing with mathematics by ignoring up to some point, part of its rigor, but always complying with the robust and nonnegotiable constraints of nature. Moreover, it was not a lonely game like mathematics. To have nature as your partner is quite a tough challenge. Maybe the fact that electronic games did not exist at that time was a key to my gaining such a vision. I thus engaged in theoretical physics, a field that is as close to nature as a Rubik's cube!

Nevertheless, rather quickly I realized that I did not have much interest in the understanding of the laws of inert matter as such. Atoms did not excite my imagination. Human behavior did. I became determined to confront the secrets of human behavior, although I had no idea of how precisely we would be able to grasp some of its big and essential features. But I was also convinced that the power and genius of the pragmatic methodology of physics could contribute towards my "crazy" plan. Of course, to implement my endeavor I had first to learn physics and in particular how physicists operate so as to identify the secrets of inert matter. My program was set.

It simply took me over 40 years to highlight what stands in common between atoms and human beings. Through a long and tortuous path, "spiced" with a lot of fights as well as a huge amount of self-will, my dream finally came true. The fundamental ingredients are in this book. At least in part. And I am no longer the only contributor to the settling down of this vision into solid equations and concepts.

Today, sociophysics exists as a novel emerging field of science that involves hundreds of physicists all around the world. At present, we are on the road, an unknown road with still a long way ahead of us before sociophysics is eventually validated as a science. In the future it may even become a hard science like physics, or be dismissed as an absurd pipe dream. However, for the time being, it is surely a new and exciting adventure of human research at the very frontiers of knowledge. The consequences and accomplishments are unpredictable and even unconceivable. This is all the fun and value of being engaged in fundamental research at the edge.

Nevertheless, piercing some of the secrets of human behavior brings with it certain risks. That is why, while applying some of the methodology of physics to this new field of social sciences as a physicist, simultaneously, as a responsible citizen I discuss these risks thoroughly. To always keep in perspective both the dangers and the hopes of sociophysics, together with the fact that dealing with human beings is of a different nature to that of dealing with atoms, is a cornerstone requirement to allow a robust and ethical development of sociophysics.

In this book, I am presenting my personal testimony, itinerary, and contributions to the field of sociophysics, but its fate will stem from the collective construction made up of the many individual contributions of researchers all over the world. In addition, the capacity to avoid a partisan politicization in formulating and addressing some fundamental issues of the political and social arena will be the key to sociophysics becoming a success story. I think.

Sociophysics

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