

Preface

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.

T.S. Eliot

The primary motivation for writing this book came from the need to define a unified framework to comprehend in a coherent picture, the long enterprise for understanding how the mind functions in scientific terms. We consider, and we will explain why, all the necessary empirical and theoretical tools are finally at hand. It is time then to deal with this challenge in simple and practical terms, out of the mist of preconceptions.

The first methodological and epistemological step is to consider this challenge in *complexity* terms. Only the synergy of different approaches can ensure that we might reach a possible result in a multidisciplinary project. In the past centuries, *Natural Philosophy* has tried a similar approach, but the empirical and analytical tools at its disposal were insufficient. Results were poor in science, though sometimes interesting in metaphorical terms. It is not casual that new attempts have been made with strong contributions of physicists and mathematicians, who realized that a solution might be near.

After complexity science, the technical instrument we need is the *synchronization theory*. This discipline is not new, as its roots date back to the XVII century. Yet, it is an area that has seen recent growth in its applications on chaotic and many body systems. It is exactly what we need in order to make our quest practically viable. It also gives us a way to root it into empirical situations and to build reliable models.

As we are dealing with many bodies and many variables, a way to cluster them into *fields* is another necessary step in order to recognize lines of order out of large arrays of complex interactions.

This part of the project is also facilitated by recent developments in *network theory* which defined the different kinds of organizations that complex nets can reach. Small world and free scale networks are some of the most recent definitions. These discoveries allow embracing scales of organization which can span from the molecular to the highest cognitive structures. The resulting organization will be what we call a *heterogeneous hyperstructure*, produced by the mass effect of billions of different interactions. Mind Force is the result of the causal power of collective phenomena and patterns.

This is the dynamical hyperstructure we have decided to call *Mind Force*. Though, we created this definition rather independently, we soon discovered that there were other important, though germinal, approaches following this same direction. The only thing we could think of after uncovering other contributions on *Mind Force* was to repeat the seminal motto by Bernard of Chartres, famous for being cited by Newton: standing on the shoulders of giants.

We are uncertain about the results of such a big challenge, but we do hope to have at least been able to propose further progress in the direction of Mind Force understanding. We are sending this book to print in the belief that the reader might find something worthy in the reading that will bring Mind Force from the realm of Holy Grail knowledge to the terrain of theory, and applications in psychopathology and wellbeing.

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