
Introduction

... we live with ideas that, if we really felt them, would disrupt our whole lives.

—Albert Camus, *The Myth of Sisyphus*

Are we alone in the universe? The question comes to mind naturally when we look up at a starry sky. And indeed, among those thousands of stars, why wouldn't there be a sun like ours, surrounded by planets, some of them inhabited by beings like ourselves? This question is among those that man has been asking since time immemorial about life, death, and the beyond, without ever leaving the realm of speculation. These questions reflect the need to put some order into the world in which we live, but also to question the framework of our everyday life. What if radio astronomers finally intercepted an intelligible message from the outskirts of our galaxy? Our view of the world would be completely upset.

This subject, which until now seemed to be reserved for philosophers and writers of science fiction, has been opening up to astronomers in the past 20 years. But where should we begin the search for life in the universe? A discovery or a new fact is often the starting point for research, but so far we have found no signs of life other than on Earth.

The search for extraterrestrial life is motivated and driven by the profound conviction that the question must be tackled now,

and that we must find an answer soon. This belief is the result of the evolution of Western thought over the last few centuries. Earth, which before Copernicus seemed to be the center of the universe, lost its privileged position to the Sun, which in turn found itself in the unenviable situation of being a rather ordinary star in our galaxy, itself lost among billions of other galaxies in an unmeasurable universe. Is not the next step that of thinking that earthly life is not exceptional either?

While we wait for irrefutable astronomical evidence which would channel future research, all hypotheses about life in the universe are permitted. The special trademark of this research — the lack of evidence, the initial conceptual vacuum — makes it all the more interesting and gives it an added dimension. Anything goes, and research on life in the universe is going off in many directions at once. Some researchers take an inventory of the building blocks of life in the interstellar medium. Others attempt to estimate the probable number of sites favorable to life in our galaxy, then consider the consequences of the likely presence of life or even of technological civilizations elsewhere in the universe.

They do not hesitate to look to science fiction for inspiration when trying to explain the universe's silence. The job becomes multidisciplinary; for example, anthropological studies of Polynesian societies stimulate studies of the colonization of the Milky Way. Aren't the stars of our galaxy comparable to islands in the Pacific Ocean, separated by huge stretches of water whose crossing endangered the lives of colonists? Others, more pragmatically, are searching for planetary systems around the stars, or are listening to the universe, hoping to intercept a message or simply an artificial signal that would indicate intelligent activity elsewhere than on Earth.

The reader too can contribute to this research. A friend with no special scientific training suggested that viruses which cause epidemics on Earth could come from outer space, carried by dust — why not? This book is, first of all, the result of a thorough examination of bibliographical sources and many discussions with colleagues in astronomy and other sciences. But it was also enriched by questions and remarks put forth by the public at various

conferences. It is indeed the public who showed me what was at stake, forced me to extend the problem beyond the limits of astronomy, and convinced me to abandon my scientific “objectivity” in order to take a stand and contribute to the debate. This sort of general examination is necessary for a preliminary survey of the subject and to give us the conceptual tools needed for the job. We have to generalize the familiar notions of “civilization,” “communication,” and even “life,” the only forms of which we know are on Earth. We must try to put our existence into perspective, to examine ourselves from the outside.

Curiously enough, one of the greatest merits of this research is that it teaches us about ourselves. We must look at our planet and its inhabitants through a stranger’s eyes. This examination from an unusual point of view can teach us much about ourselves, our limits and our particularities, but also what is universal about us. It is a way of knowing ourselves better by redefining who we are in a wider context.