Gerhard Gründer

How Do We Want to Live?

We Decide Ourselves About Our Future

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"For the next two generations: Leonhard, Nikolaj, Philipp, Johann, Finja, and Enjo."

Foreword

From the very beginning of my medical studies, I knew that I wanted to become a brain researcher. The brain was the most complex and difficult organ to understand, but it was also by far the most fascinating. It was a mystery to me how anyone could be interested in such mundane organs as the liver, the prostate, or even the heart. However, the more I became involved with the various aspects of neuroscience—for example, during my practical year in neurology—the clearer it became to me that dealing with diseases of the brain and nerves would not be enough. To this day, what interests me most are the questions about the basis and origins of mind, psyche, and consciousness. So I decided to become a psychiatrist, and I have not regretted it to this day. No medical field is as diverse and multifaceted as this one, and while on the one hand you deal with the basic questions of being human, on the other hand you have to deal with suffering people every single day, to whom you have to offer comfort and help. This is a fascinating and inspiring field of tension that maintains and promotes alertness and creativity.

My first academic teacher was a renowned "biological psychiatrist" and psychopharmacologist, and I owe my path to an academic career to him. In the course of years of clinical and scientific work, I thus also acquired a certain competence in psychopharmacology. Interfering with brain chemistry through chemical substances is an exciting field. The possibilities it has opened up for the treatment of severe mental disorders are impressive, but there is no doubt that poorly conducted pharmacotherapy can also do harm. For decades now, I have also been concerned with the question of how these substances exert their effects. Closely related to this is the question of how the activity of nerve cells gives rise to psychological experience or even an awareness of oneself.

However, I have always been skeptical of ideas that one only has to intervene specifically enough in the brain chemistry to ultimately stop any mental suffering, and people who were completely convinced—not convincing—that it was only a matter of time until we knew enough about the brain to banish psychiatric illnesses from the world astounded me. For me, the experience of self has remained a mystery, and our failure to understand how it arises fills me with humility.

Now I have the feeling that the voices (scientists, brain researchers, but above all psychiatrists) who consider the human being to be a complex biomachine that only needs to be understood well enough to eliminate depression and anxiety are becoming louder and more dominant. Psychological experience is here only an epiphenomenon of biological function. People like to compare the brain to a computer, and artificial intelligence is soon to be able to simulate brain function so well that a mental disorder can be detected before it arises, and if it does, the computer will help us cure it with molecular precision by analyzing all our "biomarkers." The projection goes so far that an Israeli historian tells us that the intervention in our brain is the path to "global happiness."

Is this just a competition of ideas, a discourse among scientists? I am convinced that there is much more at stake here. It is about a dominant, very reductionist worldview that determines how we think about ourselves and that permeates our culture. Our worldviews, however, determine how we live with each other, how we work, how we educate ourselves, and what kind of healthcare system we want. We have accumulated an enormous amount of knowledge about how our genes and our biology determine our thoughts, feelings, and actions. However, we tend to forget the enormous room for maneuver we have. Happiness is not created in the individual brain, but in the social interaction between people. And how we—actively and consciously—shape these interactions will determine our future.

Zornheim, Germany June 2020
Gerhard Gründer

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Part I

How I Do Not Want to Live

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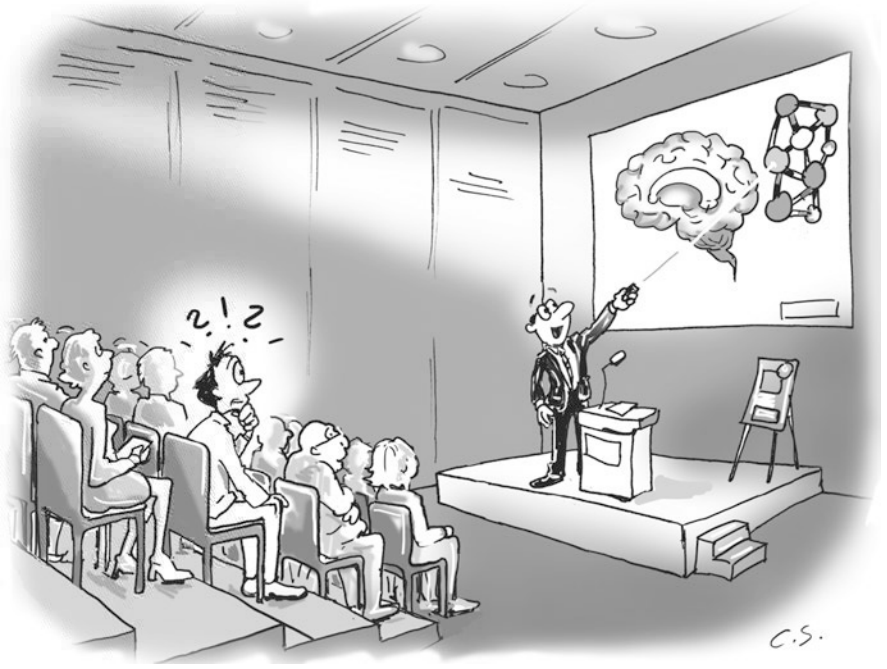
Why This Book?



Abstract What motivated the author to write the book? American scientists want to solve the "opioid crisis" in the US through a better understanding of brain chemistry, in the New York Times a columnist celebrates a new drug as the "solution" to rising suicide rates, and a bestselling Israeli author declares intervention in brain chemistry as the path to "global happiness." A biological

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reductionism is spreading, and a humanistic view of humanity is being called "outdated" by journalists. Are we on the right track?

On a Sunday morning in December 2018, I sat with several hundred other scientists in a packed auditorium at a large conference hotel on the east coast of Florida. The day before, the annual American College of Neuropsychopharmacology (ACNP) convention, held in the first half of December, had begun. At this meeting, which usually takes place in a sunny, warm place in the USA, scientists, mostly from the USA, a smaller part also from other continents, mostly Europe, meet to exchange the latest scientific findings for four and a half days. I myself have been travelling to the USA regularly for many years at the beginning of December to inform myself at this conference about the latest insights in the fields of neurobiology of psychiatric diseases and psychopharmacology. The first morning is usually devoted to large plenary sessions on topics of general interest to the entire participant community. This year it was the so-called "opioid crisis" in the USA: "The opioid crisis: What solutions can science contribute?"

The "opioid crisis" refers to a development that has afflicted the United States in particular over the past two decades. Since the late 1990s, opioid painkillers have been prescribed in the USA largely uncontrolled and increasingly also for mild pain conditions. As a result, there has been an explosion in the number of opiate addicts and opiate overdoses. In the entire year of 1999, less than 1000 people died from opiate overdoses in the United States. In 2017, not even 20 years later, that number of opiate overdose deaths was counted every two weeks! That added up to 28,000 deaths after overdose in 2017!

What did the scientists have to offer at the conference? Here, six top American scientists stepped up to present their solutions to the assembled professional public, including the director of the National Institute on Drug Abuse (NIDA). They spoke about the neurobiology of pain, opiate receptors, pharmacology and biomarkers. Only the first speaker, who introduced the symposium, showed a few numbers illustrating the drama of the opioid crisis before quickly pointing out how "basic knowledge of how the brain works and is affected by drugs, pain, and addiction […] is necessary for future transformative solutions." None of them talked about possible social or societal causes of the problem, none about possible flaws in the American health care system. Now, one might object that this is a congress for psychopharmacologists, not social scientists, and if one wanted to debate social scientific approaches to solving the crisis, one could go to a congress on social medicine.

But that is not the case. There were a lot of psychiatrists here (including me), including some who treat patients. And in the title of the symposium, "solutions" were offered. How could anyone—and here the word is very apt—be so limited as to believe that the problem of one thousand people losing their lives to opiate overdose every two weeks in the US could be solved primarily by pharmacology and brain chemistry? I have long disagreed with the reductionist models that "biological psychiatry" has to offer as solutions to the enormous disease burden that psychiatric illness has created worldwide. But what was offered here was either incredibly brazen or just naive.

Three months after the symposium in Florida, on March 7, 2019, the New York Times headlined: "Deaths from drugs and suicide reach a record in the US" [1]. The statement was based on 2017 figures. "More than 150,000 Americans died from alcohol- and drug-related deaths and suicide in 2017. Nearly one-third—47,173—were suicides." Those numbers were double what they were in 1999, the year when this type of mortality data began to be collected. The article quotes Benjamin Miller, chief policy officer of the American Well Being Trust: "There are two crises in America right now, one in health care and one in society." The Well Being Trust, according to its website, is a "national foundation dedicated to advancing the mental, social and spiritual health of the nation." According to Miller, feelings of despair, loneliness and lack of belonging contribute to suicides among Americans. An article in the New York Times, published a week before the symposium at the ACNP convention, on November 30, 2018, also states that, "The trend most likely has social causes—lack of access to mental health care, economic stress, loneliness and despair, the opioid epidemic, and the unique difficulties facing small-town America. These are serious problems that require long-term solutions." In the meantime, however, psychiatry desperately needs new treatments, and the author concludes (and this is in the title to his article!), "Ketamine may be the solution" [2]. Ketamine is a drug that has been known for many decades, used in the context of anesthesia and as an analgesic. It was first reported 20 years ago that the substance also had a very rapid—within hours—onset antidepressant effect. Numerous studies conducted since then have confirmed this finding. Then, in 2019, both the U.S. and European health authorities approved a derivative of ketamine, esketamine, for the treatment of treatment-resistant depression (depression is considered "treatment-resistant" when it has not improved on various antidepressants). After many years of virtually no new psychiatric drugs being approved, the approval of esketamine represents a small step forward. But a "solution" to the rising suicide numbers in the US? That strikes me as naive as saying we can reduce the number of deaths from opiate overdose by better understanding the opiate receptor. When, at a press

conference held at the end of November 2018 on the occasion of the annual congress of the German Society for Psychiatry and Psychotherapy, Psychosomatics and Neuroscience (DGPPN) in Berlin, I criticized the biological reductionism expressed in such simple notions, a journalist reproached me with an "outdated humanism" in a commentary that appeared a few days later [3].

I have been scientifically involved in psychopharmacology for 30 years. I try to understand how psychotropic drugs work, I try to conduct a therapy with psychotropic drugs that is as rational and scientifically sound as possible, and I have probably treated several thousand patients with antidepressants, antipsychotics, tranquilizers and several other compounds from other classes of drugs. I have also tested new drugs, for and with the pharmaceutical industry, with whom I have often worked closely, advised and from whom I have received fees for lectures. I have often been attacked for this. But I have always kept a critical distance from what I do, and it would never have occurred to me to regard psychiatric drugs as the "solution" to any psychiatric illness. Psychotropic drugs are very beneficial for many patients, they often enable them to live in the community again after only a few days or weeks of treatment. Anyone who has spent a few days in a sheltered ward of a psychiatric hospital cannot seriously doubt that these drugs can be extremely helpful, especially in acute and severe illnesses—acute schizophrenia, for example. People who yesterday were tormented by hearing voices and delusions of persecution state the day after tomorrow that they have been relieved, sometimes even freed, from these modes of experience by drug therapy. And a great many people benefit from long-term therapy with these drugs. But this is about more, this is about worldviews that are behind these "solution approaches".

In fact, most of academic, university psychiatry, not only in the Western world, believes that psychiatric disorders are due to biochemical dysfunctions in the brains of those affected. These molecular dysfunctions, in turn, can be traced back to specific risk genes for the particular disorder. So, in order to successfully treat these diseases, all I have to do is correct the dysfunction as accurately as possible with a drug, and since the dysfunction naturally returns when the drug is discontinued, I have to continue the drug therapy permanently. Of course, it is recognized that to a greater or lesser degree environmental factors and life events also play a role in the genesis of psychiatric illness, more so in one person and less so in another. Ultimately, however, the environment in this model is viewed only as a moderator of the genetic-biological risk for the disorder. These ideas may indeed be true in some severe, strongly genetically determined cases of disease. However, in the vast majority

of people who develop psychiatric illness, no biological abnormalities are found. Now it is perfectly legitimate to assume that it is only a matter of time before psychiatry has accumulated enough knowledge to be able to understand the biology of psychiatric illness to a completely different extent than we are currently able to. Biological psychiatrists like to draw the comparison to oncology, which has made enormous progress in recent years. Today, it is often possible to characterise tumours genetically with such precision that it is possible to tailor therapy to the individual patient. The fact that these possibilities have not yet been developed in psychiatry is due to the enormous complexity of the brain. However, in the age of artificial intelligence and "big data", it is finally foreseeable that it will also be possible to treat people with psychiatric diseases with very individual, "personalised" biological therapies, which will mostly be drugs.

However, it goes further than that. We have evolved into a society that pathologizes any psychological discomfort, sadness, and anxiety and declares it a disease. Many negative emotions, however, make perfect sense; they have ensured man's survival in evolution. And even today, they signal to us that something is "wrong." This may be due to us as individuals (and thus indeed to our biochemistry), but it may just as well be due to our environment, our living conditions, the way we work, live, interact with each other. Biological reductionism, as expressed in scientific symposia such as the one I described or even in the newspaper article I quoted, completely ignores this. The Israeli historian Yuval Harari takes this to the extreme in his book "Homo deus" [4]. Harari actually claims here in all seriousness that the improvement of man's living conditions is a model of yesterday. Today, and even more so tomorrow, "global happiness" will be generated by intervening in the biochemistry of the brain. The book has been bought by millions and critically acclaimed. I am sure that most of Harari's readers are not even aware of the worldview being painted here. It is worldviews, buildings of ideas, that determine how we shape our world. I will show in this book that the "homo deus" is a naive and false ideal that is not only unattainable. To aspire to it would also mean ceding man's ability to shape his future to a technocratic elite with their machines. Is that really what we want?

I chose the title of the book so ambitiously because I actually believe that we ourselves decide what image of the world we form. World views, systems of ideas, decide how we as humans want to live in the future. Each individual human being can significantly influence his or her individual destiny; they are not victims of some genetic or otherwise biological program that unfolds by fate. But even more so, we decide how we will live together as a human

community in the future. This decision will determine whether we need to inject ourselves with opiates, or any other more sophisticated substances in the future, in order to eliminate feelings of unwillingness or other negative emotions.

I wrote this book as a plea for a humane psychiatry, and such a humane psychiatry is also a political psychiatry. It advocates an improvement in living conditions for as many people as possible, living conditions in which each individual can develop to the best of his or her ability. And it is a plea for a new humanism.

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Taking Stock: Our World at the Beginning of the Twenty-First Century

Abstract For most people, life on this earth has become better just in the last 200 years. We live significantly longer, fewer and fewer people are starving or illiterate. However, this development is in marked contrast to our mental health. The global burden of disease from mental disorders is steadily increasing, with more than one billion people affected by a mental disorder or addiction. Depression and stress-associated disorders are particularly common, suicide rates are rising, particularly in the US, and here especially—most worryingly—among young girls. Do we have the right answers to these developments?

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