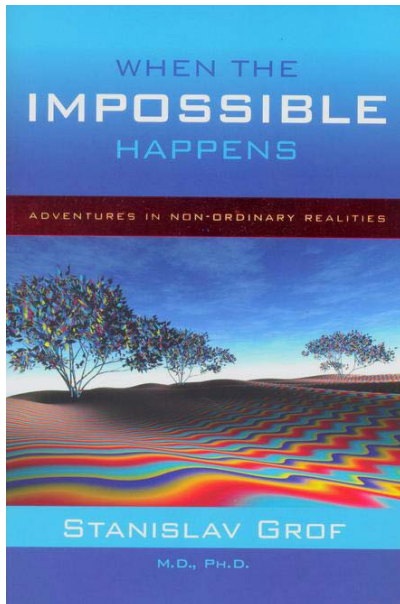


## BOOK EXCERPT



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Adventures in Non-Ordinary Reality* ↗

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## When Science Becomes Scientism

### *Carl Sagan and His Demon-Haunted World*

The challenging observations from consciousness research amassed in the second half of the twentieth century and the basic tenets of transpersonal psychology encountered incredulity and strong intellectual resistance in academic circles. Transpersonal psychology, as it was born in the late 1960s, was culturally sensitive and treated the ritual and spiritual traditions of ancient and native cultures with the respect they deserve in view of the findings of modern consciousness research. It also embraced and integrated a wide range of anomalous phenomena, paradigm-breaking observations that academic science has been unable to account for. However, although comprehensive and well substantiated in and of itself, the new field represented such a radical departure from academic-thinking in professional circles that it could not be reconciled with either traditional psychology and psychiatry or the Newtonian-Cartesian paradigm of Western science.

As a result of this, transpersonal psychology was extremely vulnerable to accusations of being irrational, unscientific, and even “flaky,” particularly by scientists who were not aware of the vast body of observations and data on which the new movement was based. These critics also ignored the fact that many of the pioneers of this revolutio-

nary movement had impressive academic credentials. These pioneers generated and embraced the transpersonal vision of the human psyche not because they were ignorant of the fundamental assumptions of traditional science, but because they found the old conceptual frameworks seriously inadequate in accounting for their experiences and observations. Much of the resistance came from representatives of the academic community, who saw the current scientific worldview as an accurate and definitive description of reality and clung to it with stubborn determination, impervious to any evidence countering it.

The nature and intensity of some of the mainstream scientists' reaction to any form of spirituality, in general, and to transpersonal psychology, in particular, seems to mirror the fanaticism of religious fundamentalists. Their attitude lacks solid scientific grounding, ignores or distorts all existing evidence, and is impervious to facts of observation and logical arguments. Closer scrutiny reveals that what they present as an image of reality that has been scientifically proven beyond any reasonable doubt is a colossus on clay feet supported by a host of a priori metaphysical assumptions.

One of the most salient examples of this category of scientists was Carl Sagan, professor of astronomy and space sciences at Cornell University in New York City. An outstanding representative of his field, he achieved worldwide acclaim by his participation as experimenter in most of the unmanned planetary probe missions, by founding the project SETI (Search for Extraterrestrial Intelligence), and creating the highly acclaimed TV series *Cosmos*. He also designed, jointly, with Frank Drake, the gold plaque with the message of Earthlings for extraterrestrial civilizations carried by Pioneer 10, the first spacecraft to leave the solar system. Shortly before Sagan's death, of myelodysplasia, his science fiction novel *Contact* inspired a widely acclaimed movie with the same name.

However, instead of enjoying his professional success and reputation in the area of his expertise, Carl Sagan embarked for unknown reasons with unusual emotional charge and determination on a crusade against everything he considered irrational, unscientific, and occult. He assumed a highly authoritative position of an arbiter and judge of observations reported by a variety of experts from several other disciplines, including parapsychology, thanatology, psychedelic research, anthropology, and comparative religion.

To accomplish his goal of sanitizing the culture from the pollution by occultism and superstition, Carl Sagan became one of the founding members of an organization called CSICOP (Committee for the Scientific Investigation of Claims of the Paranormal), associated himself with the journal entitled *The Skeptical Inquirer*, and employed the services of magician James Randi to help him prove that all claims of the paranormal were fraudulent. The epitome of his efforts was his book of passionate philippics against the dangers of irrationality, *The Demon-Haunted World* (Sagan 1997).

My first contact with Carl was through an enthusiastic letter I received from him shortly after the publication of my book *Realms of the Human Unconscious* (Grof 1975). In this book, I described that my patients undergoing LSD psychotherapy often expe-

rienced deep regression, in which they relived with intense emotions and physical feelings the memory of their biological birth. I was able to distinguish four experiential patterns that were associated with this process, reflecting the consecutive stages of childbirth, and referred to them as basic perinatal matrices (BPMs).

BPM I is related to prenatal existence in an advanced stage of pregnancy before the onset of delivery. BPM II reflects the experience of claustrophobic terror and hopelessness experienced by the fetus during the stage of childbirth when the uterus is contracting, but the cervix is not yet open. BPM III is associated with the difficult passage through the birth canal that begins after the cervix is sufficiently dilated. And, finally, BPM IV reproduces the experience of the moment of birth and the immediately following period of reconnection with the mother. Full conscious reliving of birth is then experienced as psychospiritual death and rebirth.

Carl was particularly fascinated by my description of the fourth perinatal matrix, which typically involves visions of brilliant light and of various archetypal figures appearing in this light. In his opinion, expressed in an article published in 1979 in the *Atlantic Monthly* magazine (Sagan 1979a), this observation rendered a mortal blow to the claims of the mystics, who often report visions of divine light and of celestial beings. He concluded that what mystics consider to be supernatural light and angelic beings is actually the infantile memory of emerging into the light of the operation room and seeing cloaked obstetricians and nurses. The misperception of this situation as numinous is thus a result of the immature eyesight and cognition of the newborn.

Carl's interpretation of perinatal visions taken from my book was in sharp conflict with my own description of this phenomenon. After having observed literally hundreds of experiences of psychospiritual death and rebirth, I realized that the reliving of birth functions as a gateway to the Jungian collective unconscious and that the archetypal visions that accompany it are ontologically real and cannot be derived from our experiences of the material world. This is an issue of great theoretical relevance in view of Carl's provocative statement about the nature of reality that opened *Cosmos*, his magnum opus: "The Cosmos is all that is or ever was or ever will be" (Sagan 1983).

Carl later repeated his argument in his book *Broca's Brain* (Sagan 1979b), in which he dedicated to this issue an entire chapter entitled "The Amniotic Universe." He certainly had the right to draw his own conclusions from my observations. However, disregarding my own interpretation and hallowing me as a debunker of mysticism was another matter. In doing this, he also discounted the fact that the entire second half of *Realms of the Human Unconscious*, the book he was referring to, was dedicated to a detailed description of spiritual experiences with many clinical examples. The material in it was actually one of the sources of transpersonal psychology, a discipline seeking a synthesis of genuine spirituality and science.

As transpersonal psychology, with its efforts to legitimize spirituality, continued to grow and gain more ground in the academe, it became a major irritation for Carl and the CSICOP group. Carl finally asked me, as a surviving member of the small group of professionals who had founded transpersonal psychology, to meet with him in a

session of open confrontation and discuss theoretical issues related to this discipline. I accepted his invitation and met him in his hotel room in Boston. Other participants in this meeting included my wife, Christina, Carl's wife, Ann Druyan, and Harvard psychiatrist and researcher John Mack, our mutual friend. Carl started the session by reminding me of my responsibility as a professional trained in medicine and psychology to be careful what information I release to the public because the words of educated people with academic titles are taken more seriously by lay audiences. He emphasized that it was essential for scientists to offer seasoned and unadulterated scientific truth to those who are unable to make their own independent judgment. He then began citing a series of instances in which people were deceived by various hoaxes, scams, and frauds. He brought up the case of the German horse named "smart Hans" ("der kluge Hans"), which, according to the claims of his owner, was able to perform mathematical computations; a fraud involving a figure excavated in Italy that allegedly was a petrified giant; and a few other instances. At this point, I interrupted Carl and told him I felt that what he was describing had no relevance for the subject we were supposed to discuss.

"What do you think is relevant for our discussion?" he asked.

"It is the problem of the ontological status of transpersonal experiences," I answered, "such as experiential identification with other people and other life forms, veridical out-of-body experiences, visions of archetypal beings and realms, or ancestral, racial, karmic, and phylogenetic memories. Are they hallucinations and fantasies without any basis in reality or instances of authentic connection with dimensions of reality and sources of relevant information that are normally inaccessible for our consciousness?"

"Give me examples!" he urged me, appearing puzzled and confused.

I described several instances in which individuals in non-ordinary states of consciousness identified experientially with various aspects of the material world or experienced the historical and archetypal domains of the collective unconscious and were able to gain access to information that was clearly far beyond what they had acquired through the conventional channels in their present lifetime. Three of these examples involved experiential identification with animals (eagle, whale, and lion), two of them historical events, and one the obscure archetypal vision of the Terrible Mother Goddess of the Malekulans in New Guinea.

Listening to my stories, Carl regained his composure and assumed an authoritative teaching role. "Oh, this is what you are talking about? Well, that's easy to explain; not a big mystery there," he said. "American children watch television on average about six hours a day. They see a lot of various programs, including those that contain scientific information, such as Nova or the Discovery Channel. They forget much of it, but their brains, being the miraculous organs they are, record it all. In non-ordinary states of consciousness, then, this information is used to generate what appears to be new relevant information. But, as you know, there is no way we can access information that did not enter our brain through the senses. If such information emerges, they must have received it somewhere at some time during this life."

I felt frustrated. Carl was using here the old dictum of British empiricist philosophers that had become a popular tenet of monistic materialistic science: “*Nihil est in intellectu quod non antea fuerit in sensu*” (Nothing is in the intellect that prior to that was not in the sensory organs). If my subjects’ experiences contained some seemingly new information, they must have acquired it sometime, somewhere, somehow during this lifetime through sensory input. This should be dear to anybody who has studied natural sciences; how could any educated person see it differently?

Feeling that we were facing a blind alley, I resorted to thanatology, a discipline studying death and dying. In the last few decades, researchers in this field had accumulated some fascinating observations concerning out-of-body experiences in near-death situations. Unlike many other transpersonal phenomena, these experiences are easily subjected to objective verification. Since material had been widely publicized in best-selling books, television talk shows, and even a number of Hollywood movies, I expected that it would not be difficult to make my point.

I referred to a number of thanatologica<sup>1</sup> studies that had independently confirmed that during out-of-body experiences in near-death situations, disembodied consciousness is capable of perceiving the immediate environment, as well as various remote locations, without the mediation of senses. In a fascinating study described in Ken Ring’s book entitled *Mindsight* (Ring and Cooper 1999), the capacity of disembodied consciousness to perceive the environment appeared even in people who had been congenitally blind for organic reasons. They were not only able to see for the first time in their lives, but what they saw could be consensually validated. In Ken’s terminology, they had “veridical out-of-body experiences.”

In this context, I also quoted an example from the book *Recollections of Death*, written by Michael Sabom, a cardiologist who had studied near-death experiences of his patients (Sabom 1982). I told Carl that one of Michael Sabom’s patients was able to describe in detail the procedure of his resuscitation following cardiac arrest during an operation. He reported that his disembodied consciousness first watched the procedure from a place near the ceiling. Later, it became interested in the procedure and floated down to a position where it could observe from close up the gauges on the equipment. During the interview following successful resuscitation, the patient was able to reconstruct to Michael Sabom’s surprise the entire procedure, including the movements of the little hands on the measuring devices in correlation with the interventions of the surgical team.

Having described this case to Carl, I asked him how he would explain this event in the context of the worldview to which he subscribed. He paused for a while, and then he said assertively: “This, of course, did not happen!”

I shook my head incredulously, not believing what I just had heard. “What do you mean, this did not happen? Cardiologist Michael Sabom reported this in his book based on the research he had conducted with his patients. What is your explanation for what I just have described to you? What do you think all this is about?” I asked. This time the pause was even longer; Carl was clearly thinking very hard, struggling to find the answer. “I’ll tell you,” he finally broke the long silence. “There are many cardio-

surgeons in the world. Nobody would have known the guy. So he made up a wild story to attract attention to himself. It's a PR trick!"

I was shocked. Carl's last words seriously undermined the respect I had had for him. I realized that his worldview was not scientific, but scientistic. It had the form of an unshatterable dogma that was impervious to evidence. It was also dear to me that our discussion had reached an insurmountable impasse. I saw that Carl was willing to question the integrity and sanity of his scientific colleagues before considering that his belief system might require revision or modification to fit the new data. He was so convinced that he knew what the universe was like and what could not happen in it that he did not feel the slightest inclination to examine the challenging data.

My experience with Carl's determination to preserve his scientific beliefs was later further confirmed by a scandal involving CSICOP and the so called "Mars effect." In their studies, originally designed to debunk astrology, French statisticians Michel and Louise Gauquelin demonstrated that in the birth chart of prominent athletes Mars appeared with statistically significant frequency in the ascendent or zenith (Gauquelin 1973). To their surprise, their study thus supported rather than refuted astrological prediction. The statistical probability that this could have happened by chance was one in five million. In later years, the Gauquelins tested astrological predictions involving five planets and eleven professions and found significant results; their data were later replicated independently by other researchers.

After the results of the Gauquelin study had been published, three CSICOP members, Paul Kurtz, George Abell, and Marvin Zelen, incensed by this report, got involved in the controversy, first by a critical response and later by their own study. After a number of heated exchanges, rather than admitting that they essentially confirmed the Gauquelin results, they resorted to conscious falsification of their own data. This fraud was exposed in an article entitled "Starbaby" by Dennis Rawlins, cofounder of CSICOP and a member of its ruling executive council (Rawlins 1981). When Rawlins realized that the organization was committed to perpetuating its ideological position and not to discovering the truth, he concluded that honesty was more important than an indiscriminate witch-hunt against the paranormal.

In 1984, when I was invited to lecture at the World Congress of Astrology in Luzern about my research related to the psychological importance of the trauma of birth and about the Basic Perinatal Matrices, the program actually featured Michel Gauquelin as one of the presenters. It also included another convert to astrology, Hans Eysenck, the famous fierce critic of Freudian psychoanalysis.

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## References

- Gauquelin, M. (1973). *Cosmic Influences on Human Behavior*. New York: Aurora Press.
- Grof, S. (1975). *Realms of the Human Unconscious: Observations from LSD Research*. New York: Viking Press.
- Rawlins, D. (October 1981). Starbaby. *Fate*, 34.
- Ring, K., and Cooper, S. (1999). *Mindsight: Near-Death and Out-of-Body Experiences in the Blind*. Palo Alto, CA: William James Center for Consciousness Studies. ↗
- Sabom, M. (1982). *Recollections of Death: A Medical Investigation*. New York: Harper & Row.
- Sagan, C. (April 1979a). Amniotic Universe: Reflections on Birth, Death, and God. *Atlantic Monthly*, 39–45.
- Sagan, C. (1979b). *Broca's Brain*. New York: Random House.
- Sagan, C. (1983). *Cosmos*. New York: Random House.
- Sagan, C. (1997). *The Demon-Haunted World*. New York: Ballantine Books.