physischen Bedingungen. Greene zeigte am Beispiel der Einwurzelung einer Wasserpflanze, daß dieselbe nicht genetisch reguliert wird, sondern unmittelbar aus Wachstumsbewegungen an der Wurzelspitze und Einfluß der Gravitation resultiert.

Johannes Wirz

Weiterführende Literatur

Complexity - Life at the edge of chaos, von Roger Lewin (1993), Macmillan Publishing Company, auch als Taschenbuch erhältlich.

How the leopard changed its spots, von Brian Goodwin (1994), Weidenfels & Nicolson, London, auch als Taschenbuch erhältlich.

At home in the universe, von Stuart Kauffman (1995), Oxford University Press oder Viking.

A philosopher's view on «The future of DNA» –

An international conference about presuppositions in science and expectations in society, Dornach 2-5 October 1996

For the first time on my way to the Goetheanum, and even invited as a workshop leader: a true honour. A trip in good company already brings the subject of the conference right up to my ears before arriving in Dornach. To start off with I must learn to understand the building. I have been acquainted with it through photographs for a quarter of a century: a holy bastion, centre of a vast web of beneficial radiations. For one, it looks like a concrete toad-stool, for another it represents something between a temple and a bunker. Once landed on the first floor of the double staircase - where a door, with windows like eyes, gives way to the balcony - I know for sure: I am standing in the frontal sinus of a skull and can take a glance through the orbits at the surrounding woods on the hills. I thus find myself on the place of the skull of the old Adam. A bit more frivolous, this image calls up in me the cranial mountain on the island of Peter Pan. There, Captain Hook escapes from a crocodile, which let its presence be known because of a ticking alarm clock in its stomach: a symbol for the onward pressing genetic technology? The conference participants streaming together all find themselves on strange grounds. The scientists feel a bit uncomfortable in this entourage where academic titles may not on their own call for the usual respectful treatment that they are used to in chromium-plated conference centres around international junctions. The anthroposophists are very hospitable, but at the same time do not quite know how to deal with this unknown invasion of scientific outsiders in their - so far - rather protected world. Because nobody wants to inflict his or her standard on the other, everybody becomes a bit «odd». Such a heterogeneous crowd can go into two directions: either people will form interest groups among themselves, or they will find ways to let everyone speak for him or herself and to deal with the other respectfully, because we all are in the «same boat» and cope with the same concerns. The latter asks for mutual trust.

The path taken by the conference succeeds in developing this trust. Instead of being attacked, one is asked to clarify one's own position. Everybody was free to say what he or she was concerned about. People listened carefully to all contributions – scientific, ideological, as well as poetic ones.

Soon, several main questions showed up in the lectures and subsequent discussions: Can the regular scientific approach do justice to life or does the necessary methodological reduction let the characteristics of life slip through our fingers? Even if reductionism has to take place, can one nevertheless be faithful to the essential singularity of life? Is participatory technique possible? Must we acknowledge the feeling that something seems to be inappropiate in this method and is this feeling an argument against this method? How do we justify, evaluate or develop such criteria of feelings? Where does our sense of values come from? Where do the roots lie? Who feels responsible for what? Who is going to be the controlling authority?

The anthroposophical standpoint has been put forward just like all the others on individual basis and without authoritative arguments. One voice among others, not more or not less. That's why new questions could rise on the agenda which have not been easily put forward elsewhere, like the reliabilty of our feelings when we deal with awakening values. «Non intratur in veritatem nisi per charitem» said Augustinus (354-430). In other words, one cannot enter the truth without love. Love means «charitas», not selfishness, but pity, compassion. For those who meet the things with attention and care, the objects will open themselves to show their meaning. For those who shrink or withdraw their involvement, the objects shut themselves and just show their inaccessible outside. «All what is worthy is defenceless» (Alles van waarde is weerloos), says the dutch poet Lucebert. In the light of what Augustinus said, we can also turn this around: only in shared vulnerability can something's value reveal itself. Herein lies the source of our consciousness of values. This condition was fulfilled in the conference.

One did not shrink from criticism. The balance-account at the end showed that indeed it is nice to go deeply into the source of an awareness of values and into the question whether or not genetic technology can stand that test. The social question, however, has then still not been solved. Attention for the inevitable coproduction of agrarian techniques and the problem of worldwide distribution was missing. Even if participatory technique is possible and can stand the ethical test, it will not escape being leveled down by economic laws. This problem should be placed at the top of the agenda for a follow-up conference, which deserves to come. The anthroposophical approach has proven to be an issue and a stimulant for the public debate. The organizers set in high and the performance was faultless. This impuls should be resumed quickly, because the alarm clock is ticking.

Dr. Petran Kockelkoren, Philosopher of nature, University of Twente, Enschede, Netherlands. Author of the report of the dutch governamental committee on ethical aspects of biotechnology of plants.