

More light in the lab!

Awareness eludes objective science. Meditation can help to explain the ego. A Plea

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Lucky enough to meet someone we love, the pain of losing a good friend, the abundance of a dream that we shall still vividly, the peaceful atmosphere of a spring day, the deep collection of meditation - all this is the reality of our conscious experience. No matter what the content of these experiences in detail may be, no one will be questioning their reality seriously. Despite the undeniable reality of our subjectivity and although philosophers have done for thousands of years thinking about this phenomenon, we are faced with the paradox that there are very few similarities, if we try to fathom the consciousness theory. Science, which always takes the third-person perspective - the objective view from outside - has recorded in this case surprisingly little progress.

Many scientists understand consciousness as a physiological process, which is evident from the structure and dynamics of the brain. I still vividly remember a discussion I have had several years ago with renowned neurobiologist of the medical faculty of an American university. After they had kindly presented the latest scientific equipment, with which they were able to penetrate deeper and deeper into the structure of the brain - MRI and electroencephalography - and I had finally allowed with the consent of the patient's family also, mitzuverfolgen brain surgery, we continued us together and talked about the scientific conception of consciousness. I asked one of the researchers: "Apparently a lot of hang our subjective experiences - for example, perceptions and feelings - from changes in brain chemistry. Is the reversal of this relation of cause and effect possible? Is it conceivable that the mind itself can cause changes in brain chemistry?" I was interested in it, if the converse of this causal process is at least theoretically conceivable.

The response of the scientist was very surprising to me. Since all mental events would arise from physical processes, he said, such a reversal is not possible. Although I received a courtesy not insist, I thought then and still think that there is no scientific basis for such a claim.

To explore the full awareness, we need a method that not only describes neurological and biochemical processes, but also the subjective experience of mental events. Even when working neuroscience and behavioral psychology, they do not throw enough light on the subjective experience, as both disciplines originate mainly from the objective

third-person perspective. In contrast, all contemplative traditions throughout history have emphasized the subjective exploration of the nature and function of consciousness from the perspective of the first person (first person perspective) by the Spirit in a careful manner is practiced to look at his own inner states.

In this type of study are the viewer, the object and the means of viewing aspects of the same facts, namely the consciousness of an individual experimenter. This type of mental training of Buddhism called *bhavana*, a term that is usually translated in English with 'meditation'. In the original expression from the Sanskrit sounds in the care of a habit, while the Tibetan term, the literal meaning of "*gom* has trusted." It is therefore a disciplined spiritual practice in which we are accustomed to familiarity with a particular object, which may be either an external object and an inner experience.

Again and again, meditation is seen as a space of the spirit or as a relaxation technique, but that's what I do not here. The practice of Gom does not lead to mysterious and even mystical states, which would be reserved for only a few talented individuals. It's also not about not thinking or absence of mental activity. Gom denotes both an agent or a process as well as a condition that can result from this process. In the context of our observations I would describe Gom primarily as a means. As a process of precise, focused and disciplined introspection and mindfulness that allows us to delve into the nature of an object of contemplation

Scientific experiments with meditators, with Herbert Benson's studies in Harvard took its beginning in the 1980s look, is now back on a long tradition. Benson controlled the physiological changes in body temperature and oxygen consumption in meditators who practiced in the *tummo-practice* in which it is inter alia to the generation of heat at a certain point of the body. As Benson and Richard Davidson, who works at the University of Wisconsin in Madison, performed experiments with hermit in the Himalayas, including in the mountains surrounding Dharamsala.

For the hermits who have chosen to live in the solitude of the mountains, such studies are a fundamental intervention in their life and spiritual practice. Therefore, it is not particularly surprising that many of them were reluctant at first. Most were able to sense the whole thing just do not realize it except that the interest of some strange men should be satisfied, which were packed with equipment through the mountains. However, I was convinced - and still am - that a scientific study of consciousness of meditators can be very important, and therefore made every effort to persuade the hermit to the experiments agree. I suggested to participate in the spirit of compassion in the experiments: If the beneficial effect of the collection of awareness and care of wholesome mental states could be scientifically proven, it would be beneficial effects on others. I just hope I was not too severe. Some hermit agreed, hopefully convinced by my arguments, I would hope not because they recognize the authority of the Office of the

Dalai Lama subdued.

The training of the mind is like learning of Cycling

Buddhism has long since out of a theory that is known in neuroscience as "brain plasticity." The Buddhist terms in which this idea is taken, differ fundamentally from those of cognitive science, but it is important that both the awareness to be open look for changes. The concept of neuroplasticity is believed that the brain is largely malleable and constantly changing based on experience by constantly produces new connections between neurons and even produce new neurons. Research has engaged in this context, especially with people with special services, with athletes, chess players and musicians, and was able to prove that their intensive training is reflected in changes in the brain. This group of people has interesting parallels to meditators, their dedication to their practice requires an equally large commitment of time and effort and provide the special achievements in their field.

Thus, for experienced meditators in the experiment already a greater activity in the left frontal lobe was detected, a brain region that is associated with positive emotions such as happiness, joy and contentment. These results suggest that we can cultivate a state of happiness by deliberately acting on the brain, mind training.

A viewer who wants to change his mind or fathom the mind with empirical, introspective agents, requires a wide range of products, which he refined through careful repetition and practice and applying precise and disciplined. This practice requires the ability to sustain attention for a period of time - to direct to a selected object - just like these may be. One can assume that the mind learns through constant habit which he specifically established ability - to improve more and more - attention, reasoning, imagination. Finally, this activity by the continuous, repetitive, almost becomes second nature. Here the parallels with athletes or musicians is most evident. We can compare this process but also swim with it, or learn to ride a bicycle. At first it is very difficult, almost unnatural, but when you have learned it, it's suddenly easy.

The basic training of the mind is the development of mindfulness, especially on the basis of breath awareness. Normally, our consciousness is relatively unconcentrated, and our thoughts are moving in a random manner and scattered from an object to another. By developing mindfulness, we learn the first thing to be ourselves aware of this process of distraction, then we can use our mind in a gentle manner set so that we can direct it to the undeflected objects that we want to focus. Advanced care is reflected in a pronounced sensitivity of over everything that happens in our minds and our immediate area, as insignificant as it may seem.

These meditative practices can raise awareness calm and disciplined, but if it should be our aim to penetrate deeper into the subject itself, we need more than a concentrated

mind. We must acquire the ability to do is to study nature and properties of an object with the greatest possible precision. This level of exercise is described in Buddhist literature as insight. In the calm and quiet stay, the emphasis is on maintaining the concentration, without distraction, and trying (focused on one point, Ed) to realize the single-pointedness of mind. In practice, the emphasis is on understanding the critical inquiry and analysis, without losing the single-pointedness of mind.

If our objective is to integrate the first-person perspective in the scientific method in order to develop a new approach to the study of consciousness, we need to practice fortunately not exercise for hours. It is sufficient, both techniques - One directedness and investigation - to link up to some degree with each other. Disciplined exercise is the key. Every physicist has to go through training and develop certain skills. Someone who wants to develop the skills of the methods of the first person who needs this in about as much time and effort to undertake. I want to emphasize that the acquisition of mental skills, like the training of a physicist, a matter of will and concentrated effort, but it is certainly not a mystical gift for the few.

For the meditation research, it could also be very interesting to deal with what is described in the Tibetan tradition, as the experience of clear light. It is a very subtle level of consciousness, which shows short term in all people at the time of death. Similar brief moments of this condition can occur during different times in a natural way, during sneezing, for example, in a faint, deep sleep and during sexual climax. This state of mind is characterized by absolute spontaneity and the absence of a sense of self or a grasping ego. Experienced practitioners can cause this condition through meditative techniques consciously. When the clear light at the moment of death appears in a natural way, these people are able to stay for longer in it while maintaining mindfulness.

Even in midsummer showed no signs of decay of dead

Ling Rinpoche, my personal teacher, stayed 13 days in the clear light of death. Although he was clinically dead already and had stopped breathing, he rested in meditation posture, and his body showed no signs of decay. Another accomplished meditator stayed for 17 days in this state, and in the tropical heat in summer in India . It would be interesting to find out what in this time at the physiological level is done and whether there is any detectable biochemical processes. When Richard Davidson's group arrived in Dharamsala, she was keen to study this phenomenon. But then died - I do not know whether I should say, fortunately or unfortunately - not a meditator.

Consciousness is a rather challenging object and it therefore differs from material objects such as biochemical processes. But its volatility it fully shares with certain phenomena in physics or biology, such as the elementary or the genes. Nowadays, since the processes and work procedures are established to conduct research in general, seem

to us these things familiar and uncontroversial. Their research is based solely on the observation - no matter what philosophical background before a scientist performs an experiment that ultimately, the empirical evidence and the phenomena themselves determine what is real. The same applies to the study of consciousness.

On this basis, I imagine increasing the scope of the science of consciousness, which we can expand our collective knowledge of the human spirit in a scientific manner.

A certain level of experience, and even exercise in the described techniques of mental practice (or other) must in my opinion be an integral part of the training of cognitive scientists, if science wants to be a serious endeavor, diversified methods for a comprehensive study awareness develop.

Ultimately, the question of whether consciousness can be reduced to physical processes or whether our subjective experience is an intangible attribute of reality might be a matter of philosophical conviction ever. Perhaps science will never be able to resolve conclusively. I believe, however, that to Buddhism and science can meet in a joint exploration of consciousness, without getting caught up in a philosophical dispute about whether consciousness is ultimately physically justified or not. Both research traditions could emerge enriched from this encounter. This collaborative exploration will not only contribute to a deeper understanding of consciousness, but we bring the dynamics of the human spirit and its relationship to suffering closer. This would be an important contribution to the alleviation of suffering, which in my eyes, our central task in this world.

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