

HARALD WALACH

## RECONCILING SPIRITUALITY AND SCIENCE IN THE TWENTY-FIRST CENTURY

### Elements for a World View Incorporating Spiritual and Scientific Insights<sup>1</sup>

#### 1. EVERY SYSTEM OF THOUGHT NEEDS ABSOLUTE PRESUPPOSITIONS – THE IMPORTANCE OF WORLD VIEWS

Post-modernism has as one of its sources the basic insight of the 20<sup>th</sup> century that there is no single system of thought or language that can prove its own foundations with the means of the system itself. Philosophers and theoreticians of language, following Wittgenstein's analysis and other insights within the philosophy of language, have come to understand that it is impossible to finally prove a system, without recurring on a certain use of language. French constructivists have pointed out that there is no absolute ruler that could make a final and valid distinction between systems of thought. The mathematician Gödel proved formally his famous theorem, using the Russell-Whitehead system of mathematical logic: that no single system is possible that can prove its own truth only with the means supplied by the system itself.<sup>2</sup> In other words, every system of thought, every formal or language system has to resort to fundamental sentences or definitions which are outside of the range of the system itself, in order to lay the foundations for the system. Otherwise ambiguous sentences arise within the system. This recursive structure means that one has to fall back on fundamental presuppositions which always have to be made, and which cannot be proven or dismissed by arguments relying only on the system itself. The British philosopher Collingwood, who was among the sources of Thomas Kuhn's theory of scientific revolutions, formulated this insight concisely and applied it to science as a whole:<sup>3</sup> Every theory, every philosophy, every scientific practice necessarily rests on sentences which he called absolute presuppositions. They contain the

---

<sup>1</sup> My work is supported by the Samuelli Institute for Information Biology. I am grateful to Birgit Frey-Schuster and Hartmann Roemer, who read an earlier draft of this manuscript and made valuable comments.

<sup>2</sup> K. Devlin, 'Kurt Gödel: Separating truth from proof in mathematics', in: *Science* 298 (2002), 1899-1900.

<sup>3</sup> R.G. Collingwood, *An essay on metaphysics*, Oxford 1998 (orig. publ. 1940).

meta-theoretical framework of a theory. Such absolute presuppositions describe what is thought to be basic in the world, epistemological beliefs on how to gain knowledge about the world, moral and ethical principles of conduct, etc that are considered to be given or true beyond doubt. These absolute presuppositions are not discussed within the framework of a certain scientific or other practice, but are necessary for it to work. They describe basic tenets and a silent consensus of a time period and can be loosely addressed as a world view shared by most contemporary writers and workers. For instance, among the absolute presuppositions informing today's modern science are ideas like the following:

- Matter is primary, mind or consciousness is secondary.
- Complex entities can be analysed into their constituents without losing vital information.
- Individuals are primary, and constitute by secondary relations more complex entities. Thus atoms are made out of more fundamental particles, while they themselves are fundamental to molecules, which in turn are the building blocks of organic tissue and organs that make up organisms, which in turn form groups, etc.

Examples of absolute presuppositions could be multiplied which are necessary for our science to function, but not necessarily derivable out of the scientific process itself. They have the function to direct and regulate the very general behaviour and outlook of a scientific generation. They determine what counts as real, how it can be accessed, and what to expect or not expect from our striving to understand the world. Collingwood showed convincingly that these absolute presuppositions operate mainly on an unconscious basis, are rarely, if ever, discussed and debated rationally, and are normally not subject to change due to a rational process of discussion, but change only slowly as a function of a general change in outlook within society at large. On the other hand, scientific discoveries and changing outlooks derived from scientific insights also slowly change the public world view and the absolute presuppositions derived thereof, and hence re-inform the scientific way of looking at the world.

It goes without saying that many world views are possible and in fact have been held within history. Thus it is often the case that parallel or even contradictory world views inform different parts of society. For instance, today the consensus of the scientific community about the nature of mental events is certainly not shared by many institutions of society or the public at large. This is also true in a historical sense, and if, in the remainder of the paper, I will talk about a world view as general I mean this in a very generic sense and it has to be taken with some discretion. By 'world view' I mean this meta-framework, in English everyday language also called *Weltanschauung* or 'philosophy' that forms the basis of scientific or societal institutions and operations.

## 2. THE POST-MODERN SITUATION – LACK OF A COMMON VIEW

The insights formulated in the first section, together with complex political changes after the two big World Wars, have resulted in the post-modern situation. This is characterized by a multitude of differing, even contradictory world views and meta-frameworks. Some people see post-modernism as a breaking free from old intellectual and dogmatic bondage, while others shun it as a dangerous source of liberality and loss of values. Two general and divergent reactions against this situation are obvious: On the one hand, we find a new moral and philosophical relativism, and on the other, a turn towards fundamentalist positions. This has also to do with the fact that, in the wake of post-modernism, spirituality and religion, as traditional sources of meaning, moral and ethical as well as personal inspiration, have been relegated to the private realm and are not the topic of scientific or public discussion any longer. The question I will address in this paper is: Is there a third way open to us post-modern people apart from the two options of fundamentalism or relativism? And if so, what might the elements of those options be? Does spirituality have a potential role to play? Before raising the issue I would like to make clear in a short historical analysis the importance of this question and the complexity of the situation.

## 3. IN SEARCH OF A NEW WORLD VIEW – HISTORICAL AND FACTUAL PRECONDITIONS

The common world view of the Western world has been influenced by religion for more than 2000 years. While Judaism and Islam have both had important functions in and influences on the development of Western science, the majority view of the major institutions and writers who have influenced the making of modern science, was undoubtedly rooted in Christianity, broadly speaking. This means that a basic spiritual and religious experience, which I would like to call Christian basic experience, has blended with diverse and multifarious cultural, political, and economic situations, and has developed from them. One should not forget that what we normally call Christian religion evolved from a miniscule movement on the very fringes of the Roman Empire. Here, from roughly 50 AD, diverse individuals and small groups talked about certain historical events and experiences which were later propagated throughout the empire.

My starting-point is the presupposition that those purported historical events were founded on some basic experience. By experience I mean a basic insight, which combines emotions, intellect and motivation, at the same time. For our purposes it is enough to discern four basic experiences which were obviously at the base of the religious teachings, and can also be found in other religions. For

brevity's sake, I parallel the Christian experience with the Buddhist one. This is intended to at least suggest a potential common ground in experience, although it is certainly not sufficient as an argument as such. This would have to be done much more systematically. Meanwhile the suggestions at parallel experiential structures might help from diverse religious and experiential backgrounds to discover potential both for bridging and for diversity. The four basic experiences, which seem to have parallels at least in the Christian and also Buddhist tradition are:

- 1) The basic reality is good and of a loving nature toward mankind. This finds its expression in the fact that the rabbi Jesus, who was later called Christ by his followers, consistently addressed this fundamental reality by the name of Father, and later scriptures enshrined this teaching in the simple sentence 'God is Love'. In doing so, the historical Jesus was following the tradition of the old scriptures, which frequently addressed the last reality as Father, since God's name was banned from use by humans.<sup>4</sup> This is also the essence of the enlightenment experience of the historical Buddha Shakyamuni.<sup>5</sup>
- 2) Out of this basic experience, the primacy of connectedness before individuality can be developed. It is neither the individual nor the single person who is primal, but the general connectedness of all humans and beings. This is expressed in diverse sayings about the importance of love towards fellow humans, which is equally important as love of God. Catarina of Siena later condensed this in the saying 'Love of God and love of your neighbour are one and the same'. That connectedness is primary is a basic teaching of buddhism, derived from the experience of *satori* or *kensho*.<sup>6</sup>
- 3) Death is a transition towards life. This is the most central experience to find expression in the reports of the New Testament about the death and resurrection of Jesus. Death is a chiffre for enlightenment in the Buddhist tradition, where the small ego has to die in order for the true nature to come to life.<sup>7</sup>
- 4) The everlasting presence of this reality across time and space. This seems to be at the foundation of the reports about the sending of the Holy Spirit.

<sup>4</sup> N. Douglas-Klotz, *The hidden Gospel: Decoding the spiritual message of the Aramaic Jesus*, Wheaton (IL) 1999.

<sup>5</sup> R.L.F. Habito, 'Buddhist philosophy as experiential path: A journey through the Suta Nipata', in: *International Philosophical Quarterly* 28 (1988), 125-139; D.T. Suzuki, *The essence of Buddhism*, Kyoto 1968.

<sup>6</sup> H.M. Enomiya-Lassalle, *Zen und christliche Spiritualität*, München 1987; M. Kalff, 'The negation of ego in Tibetan Buddhism and Jungian psychology', in: *Journal of Transpersonal Psychology* 15 (1983), 103-124; S. Odin, *Process-metaphysics and Hua-yen Buddhism: A critical study of cumulative penetration vs. interpenetration*, Albany 1982.

<sup>7</sup> P. Kapleau, *Die drei Pfeiler des Zen: Lehre, Übung, Erleuchtung*, München 1981.

There are certainly more such fundamental experiences, but for the moment we will focus on the above. This basic Christian experience seems to have been the motivation for the early propagators of this teaching to preach and find followers. This teaching was in stark competition to a multitude of religions during the time of the Roman Empire. Therefore, it is a first quality historical phenomenon that the fringe community of early Christians could develop into a religion of worldwide importance. It is very important for the understanding of that development that the original experience was amalgamated with political, philosophical and scientific world views of the antique world.<sup>8</sup>

It was one of the great achievements of the fathers, the early Christian theologians between the second and sixth century, to have used the language of Platonic and Neo-Platonic philosophy for framing the Christian experience. This permitted a marriage of reason and faith which did not have to stand in contrast to science, and which made it possible to view Christian experience and religion as rational. One of the basic achievements was the resolution of the contradiction of how a human being could be human and God at the same time, as decreed in the dogmatic sentences of Nicea, and later Chalcedon 451 AD.<sup>9</sup> This complementary or paradoxical sentence overcame the logical contradiction that was expressed in this statement of faith, and cleared a path for a rational stance towards Christian teaching.

Another important aspect of philosophical reinterpretation was the marriage of Christian experience and Platonic and Neo-Platonic speculation.<sup>10</sup> Out of this combination developed the Christian teaching of trinity, which showed how a multitude of persons and a unity of substance could be brought together in thinking.

When after the Dark Ages during scholastic times the insights and knowledge of Aristotelian philosophy was interpreted mainly by Thomas Aquinas in similar ways as consonant with Christian teaching, it seemed to be possible for a short period that a view of the world and of man could be possible which combined highest rationality with faith and piety at the same time.<sup>11</sup> This scholastic synthesis

<sup>8</sup> M. Clévenot, *Der Triumph des Kreuzes*, Brig 1988; M. Clévenot, *Die Christen und die Staatsmacht: Geschichte des Christentums im II. und III. Jahrhundert*, Brig 1988; M. Clévenot, *Von Jerusalem nach Rom: Geschichte des Christentums im I. Jahrhundert*, Brig 1988.

<sup>9</sup> K.H. Reich, 'The Chalcedonian definition, an example of the difficulties and the usefulness of thinking in terms of complementarity?', in: *Journal of Psychology and Theology* 18 (1990), 148-157.

<sup>10</sup> W. Beierwaltes, *Platonismus und Idealismus*, Frankfurt 1972; E. von Ivanka, *Plato Christianus: Übernahme und Umgestaltung des Platonismus durch die Väter*, Einsiedeln 1964.

<sup>11</sup> G.K. Chesterton, *Thomas von Aquin: Der Heilige mit dem gesunden Menschenverstand*, Heidelberg 1956; E. Gilson, *History of Christian philosophy in the Middle Ages*, London 1955; M. Grabmann, *Thomas von Aquin: Persönlichkeit und Gedankenwelt*, München 1946.

disintegrated shortly after Thomas's death, when William of Occam doubted the very foundation of the philosophy and teaching of Aquinas. It was mainly the deconstruction of the rational universe, introduced by Plato and Aristotle, and adopted by Aquinas that was responsible for this breakdown. Occam's idea was to attack the naturalization of religion which Thomas had achieved, in order to give way to the almighty and unrestricted power and sovereignty of a God who was part of the experience and spirituality of Occam the Franciscan.<sup>12</sup> This certainly was the motivational and personal background to his logical, analytical, and scientific critique of the Thomasic and Scotist system. Thus, the first synthesis of a complete philosophical and Christian view of the world in scholastic times had already been the starting point for its destruction. Occam's approach was later adopted in multiple ways and led to a development which empowered the sciences by providing the instruments needed for development: analysis of notions and language, analysis of logical preconditions, and the tools for formalizing language. The development of the natural sciences, which had progressed steeply since Robert Grosseteste took its course.<sup>13</sup>

When Descartes qualified two separate realms at the beginning of the seventeenth century, the material and the mental world, this was only an expression for what had already been started implicitly since the end of the scholastic era. Descartes said in his *Traité de l'homme* that organisms are mere *automata*.<sup>14</sup> This was the birth of the machine paradigm of organismic life, which led to impressive results in biology, biochemistry, and also in understanding neurological processes. Its final consequence is that the brain is being analyzed as a complex machine, which by dialectical irony goes directly against Descartes' dualism of *res cogitans* and *res extensa*. As a consequence, from a scientific point of view ontological dualism, as introduced by Descartes is practically non-existent nowadays.

Thus, a basic premise and foundation for what was a scientific view of the world and man since scholastic times has been destroyed, depriving religion, and especially the Christian version thereof, of a philosophical standpoint within a scientific consensus. Other philosophical systems which could be used for founding a Christian, or for that matter any spiritually founded world view, have lost ground by the basic insight of the twentieth century that no single system is in a position to produce its own foundations out of its own structure, as described in Section 1 (above). Therefore, the twentieth century is a century of the deconstruction of philosophical systems and of philosophical humility. Nowadays we

<sup>12</sup> G. Leff, *William of Ockham: The metamorphosis of scholastic discourse*, Manchester 1975.

<sup>13</sup> A.C. Crombie, *Robert Grosseteste and the origins of experimental science 1100-1700*, Oxford 1953.

<sup>14</sup> A. Beckermann, 'Aristoteles, Descartes und die Beziehungen zwischen philosophischer Psychologie und KI-Forschung', in: E. Pöppel (Ed.), *Gehirn und Bewusstsein*, Weinheim 1989.

do not have a common ground or consensus for a philosophically and scientifically accepted *weltanschauung*, which would provide the basis for a spiritual and religious world view. In other words: As a result of the historical development spirituality and religion has been relegated to one possible option among many others, science being one and eventually even a more powerful one. It seems that science, in the views of many contemporary writers, even plays the part of a *weltanschauung* itself in the form of scientism, the belief that science will help us solve all problems eventually.

It is this historical situation from which the following question arises: can there be a new scientific world view which provides a foundation for a world view incorporating spiritual experiences? Or is this only the nostalgic hope of those who have not understood the pace of history?

#### 4. A META-LEVEL

The apparent antagonism between scientific world view and spiritual experience might possibly be resolved if we are able to reach a meta-level of discourse. Jean Gebser's model of the five stages of development of consciousness might provide such a meta-level.<sup>15</sup> Gebser's model of the development of consciousness has not received wide recognition by the scientific community; in my opinion without good reason. This may be because Gebser himself was not an academic and being a non-professional had problems making himself heard. Another reason may be the fact that his model of development of consciousness contains an implicit challenge and threat to our understanding of science. For Gebser postulated in his model of the development of consciousness that individually and collectively, ontogenetically and phylogenetically, human consciousness develops in five more or less discrete and discernable stages.

The first stage, which Gebser calls *archaic consciousness*, cannot really be described. One reason for this is that we do not have cultural testimonies for this, nor do we have personal or individual remembrances of times when we ourselves were immersed in archaic unity with ourselves and the environment. The basic situation addressed by archaic consciousness is that of unseparated unity. In this state of consciousness there is no ego or conscious self, which consciously or semi-consciously could have experiences and could thereby experience itself as separated and separable from the world. The earliest cultural testimony Gebser was able to quote on this point is the fact that in an early Chinese dialect the

---

<sup>15</sup> J. Gebser, *The ever-present origin*, Athens 1985.

notions for blue and green are identical. In this early dialect there is also the saying that 'the ancients slept a dreamless sleep'. The first saying Gebser interprets as there being, on a very early cultural level, no difference between heaven and earth, and that consciousness was at the same time completely one with the world. The second sentence Gebser interprets as there being no soul in the specific sense of the word, which could have something like dreams in the first place.

The archaic phase is followed by the *magical* phase in Gebser's terminology. In this phase consciousness first expresses itself as one which collectively opposes nature. Persons and cultures which are still in this phase, are already attempting to put some distance between themselves and nature and to make nature useful in some way. But these attempts are made out of a relatively unbroken consciousness of unity with nature. In this experience of unity with nature, nature is being influenced by magical man through certain ritual preconditions. This was already seen by Schopenhauer, who called magical influence a direct effect:

Moreover, the same animal magnetism to which we owe these wonders has also testified direct influence of the will on others, and across distance in multifarious ways: This is the basic character of what has been named by the shunned name of magic. For this is an action which is liberated from the causal conditions of physical causing, namely contact. It is direct unmediated action of our will itself; [...] Animal magnetism, sympathetic cures, magic, second sight, clairvoyant dreams, seeing of spirits and visions of all kind, are related phenomena, branches of one stem and give sure, doubtless testimony of a nexus of all beings which rests on a completely different ordering of things than nature does, which has as its basis the laws of space, time, and causality. The other order on the other hand follows a deeper, a more original and more immediate order, and this is the reason why the first and more general and therefore formal laws of nature are not valid anymore, and why space and time cannot separate individuals anymore such that changes can be wrought in a completely different way than the one taken by physical causality and its chain of seamless elements.<sup>16</sup>

Schopenhauer has, as Gebser does, taken will and consciousness as that which can act directly upon nature. This happens mainly through rituals that enact the participation of man with nature, and the connection of the consciousness with nature. Along those lines, Gebser interprets magical rites of the hunt as the attempt to overcome nature through a victory in image. What happens to the effigy or the image of a hunted animal happens to the real animal in reality. For a magical man there is no difference between image and reality, because reality

<sup>16</sup> A. Schopenhauer, 'Versuch über das Geistersehen', in: W. von Löhneysen (Ed.), *Parerga und Paralipomena. Kleine philosophische Schriften Bd. 1*, Darmstadt 1968 (*Sämtliche Werke*, vol. 4), 319f. (my translation).

is present through the image. Therefore magical consciousness in Gebser's sense is a consciousness of unity which is starting to produce some distance towards nature and uses this distance to produce action and power.

An artificial expression of this magical connectedness can be seen in different paintings which depict people who only have one or two eyes, no mouth but instead are surrounded by a corona of rays. Gebser interprets this as a communication through the aura, communication on the basis of connectedness and telepathy, which was possible without language and direct signs. That this interpretation is not completely wrong and at least possible, can be seen in anthropological testimonies, which in Australian aborigines for instance seem to point to a way of consciousness in which they can be in original connection through distance with their relatives, and which also enables communication and relation without language.

It is only in the *mythical* phase, the third phase according to Gebser, in which individuality starts to unfold. But this individuality is mainly an emotional ego. This Gebser sees as documented in the myths of the Greeks and other peoples, where we always find one basic theme, namely that of a hero having to find his way out of nature's diverse captivations, as in the different dangers described by the Odyssey and experienced by Odysseus before he finds his home. This can be interpreted as an expression of the fact that the ego of the hero emerges only slowly out of the connectedness with nature. Thus, he has to fight the dark depth of his own soul, which threatens to drag him down into primordial connectedness with nature. This ego experiences itself as nature in the emotional soul. It is not until classical Greek times and later on the Renaissance that the modern *mental consciousness* starts to emerge from this. This modern mental ego is then signified by the final separation of ego and world, of consciousness and nature, of subject and object.

This can be seen in the great philosophical writings, which since the pre-Socratic philosophers have brought the autonomy of rationality against nature, the understanding of natural processes as rational and causal to the center of attention. While through the Dark Ages this insight was lost, it reemerged during the late Middle Ages and in the Renaissance. The most important iconography for this is the development of the perspective. When Petrarca climbed Mont Ventoux it set the cultural mark for this movement. It is the instance when for the first time a human being experienced and expressed this experience of distance between ego and nature. And this is reflected in theoretical debates and practical exercises, which ultimately led to the establishment of perspective in painting.<sup>17</sup> Perspective in painting is the condensed image of the experience of

---

<sup>17</sup> E. Panofsky, *Renaissance and renaissances in Western art*, Stockholm 1960.

the mental consciousness as separated from nature. This mental consciousness, in which the analytical mind and language have found themselves has been the dominant mentality ever since at least in Western culture. Science is its expression and we should not underestimate the benefits which we draw from it. This mental consciousness has apparently produced nearly complete freedom of man from nature. The dark side to this development is the separation from nature with all its problems which we have to face globally, politically, and ecologically. It is the development of the mental consciousness that produced the notion of the equality and dignity of man, and of the insight that everybody as an individual has certain rights and basic needs. Without this differentiation of the mental consciousness we would not have a declaration of human rights today; we would not have science and engineering in the same sense as we have now, and we would not have large parts of our culture. And it is the same mental consciousness that produces the problems we have to face.

But the important point about Gebser's analysis is that it does not stop here, but points beyond this development. His analysis shows that this mental consciousness has reached its boundary today. Gebser sees an 'integral consciousness' arising. According to Gebser, integral consciousness is a form of consciousness that is only slowly developing and therefore can only be described in a very sketchy way. Its hallmarks are a-perspectivity, timelessness, and the availability of all four preceding structures of consciousness. The starting point for formulation of this thesis has probably been Gebser's own enlightenment experience. When Gebser was travelling as a young man in Spain, he had a deep experience of enlightenment, which later was declared by Zen master Suzuki as a true *kensho* experience.<sup>18</sup> Therefore, it is a likely hypothesis that by 'integral consciousness' Gebser meant enlightenment-consciousness which starts to collectively emerge.

The basic idea of such an integral consciousness is the basic experience of connectedness, not as an unconscious one, but as conscious and integrated. A direct sign of this experience is that the separation of subject and object, of individual and world, which is the signature of the mental consciousness, is relative, and that connectedness is primary. In the integral view of the world this does not entail dissolution of the ego, but something like transcendence of the ego. Connectedness is being realized here as something achieved consciously. Therefore, and this is of prime importance, integral consciousness is not a step back into oceanic experience of the all-encompassing unity of the infant, but it is an important transcendence into a new form of consciousness.

---

<sup>18</sup> N.K. Barstad, 'Welten aussen und innen: asiatische Monde, westliche Tage, und Evolution als Nachvollzug im Leben und Werk Jean Gebsters', in: *Beiträge zur Integralen Weltansicht* 10 (1995), 69-98.

A-perspectivity, being the signature of the integral phase, means exactly this: not one perspective only, but the simultaneous presence of several perspectival views. Such a view of the world entails that science, as it has been understood conventionally, has only a relative position as a mental enterprise. Science would not be the last pivotal point of human attempts at knowledge and insight, but only one specific modality of insight.

The third way between fundamentalism and relativism would be obvious from that perspective. It would be the immediate experience of reality itself, which is the basis of all spiritual traditions. It is clear that we would have to clarify whether this basic experience of different traditions is comparable, identical or generically different, and whether such a thing is possible at all, which is denied by contextualist interpretations of mysticism.<sup>19</sup> There are a number of arguments that endorse the view that there are at least commonalities between these experiences. One very basic commonality is exactly this experience of general connectedness. This experience is at the core of the Buddhist *kensho* or enlightenment experience, and it is also at the core of the experience of Jesus which enabled the historical Jesus to address this basic reality as Father and to act out of it.

In the following I will present some elements for a world view that bridges modern scientific insights and spirituality without making a claim of systematizing them or naming all the elements.

## 5. RECONCILING SPIRITUALITY AND SCIENCE – SOME ELEMENTS

### *Connectedness*

Connectedness is the basic experience of all spiritual traditions. By this we mean the basic experience that a separation between ego and world, between self and others, is always to some degree artificial, and an act of simple choice. That this sentence is true in a factual sense can be seen by a relatively basic analysis of all the dependencies that are relevant for every type of existence and life. In this sense a simple analysis of all those circumstances which contribute to a rise and the continuation of any simple or complicated organism would already confirm the existence of this basic connectedness.<sup>20</sup>

It was this insight which the philosopher Alfred North Whitehead formulated in his basic book *Process and Reality* as nexus that is constitutive for individual

<sup>19</sup> Cf. S.T. Katz (Ed.), *Mysticism and language*, New York 1992.

<sup>20</sup> G.W. Leibniz, 'Monadologie', in: A. Buchenau & E. Cassirer (Eds.), *Hauptschriften zur Grundlegung der Philosophie*, vol. 2, Hamburg 1966.

beings.<sup>21</sup> In spiritual experience this experience of connectedness is transcended towards a transformative experience from within which means that not only insight but also everyday life is undergoing change. For the inner experience of connectedness leads to the insight that our own wellbeing is in a very deep sense the same as that of our environment and fellow human beings. And this inner experience is not only intellectual but also emotional and motivational, which means that it is an impulse to action. In other words, the experience of connectedness results in the insight that there is no individual happiness without common welfare; no self-actualization without regarding the benefit of others; no self-development at the expense of the environment or the surroundings. Thus, the spiritual experience introduces an element that cannot be found in the mental insight of connectedness alone. The basic experience of connectedness, then, I claim, is the basis for all spiritual traditions. How it is spelled out differs in different cultural backgrounds. For every experience has to be realized in a cultural and linguistic space, and cannot be seen separated from it. The cultural space in which this experience was embedded during the sixth century BC in India was completely different from the one in which this experience was made around the change of the time in Palestine, at the time of the Roman conquest. It has to remain the future task of a comparative and transdisciplinary science of religion to spell out the commonalties and the differences of these experiences and their expressions against their own cultural backgrounds. For the Christian cultural space this means that we have to look for traces of this experience of basic unity to better understand other cultures. The teachings of Jesus of a father who faces the world and humanity with basic benevolence, a father with whom he felt he was one, seems to be the decisive semiotic chiffre at this point. From this experience it is a simple consequence, less of a moral-ethical than of a logical-existential nature that all humans and beings have to be respected in the same way as one's own person.

Against this background it seems interesting to note the fact that science and modern physics have reached a very similar analogous situation in their theories. Within the formalism of quantummechanics we have the situation that elements of one and the same quantum system are correlated independently of their temporal and spatial distribution. This fact is well known meanwhile by the term Quantum Entanglement or EPR correlatedness. It is not only known, but also experimentally well validated and accepted.<sup>22</sup> It is unclear what importance this

<sup>21</sup> A.N. Whitehead, *Process and reality* (corrected edition by D.R. Griffin & D.W. Sherburne), New York 1978 (1<sup>st</sup> publ. 1929).

<sup>22</sup> H. Atmanspacher, 'Metaphysics taken literally', in: U. Ketvel (Ed.), *Festschrift in honor of K.V. Laurikainen's 80<sup>th</sup> Birthday* (Vastakohtien todelisuus – Juhlakirja professori K.V. Laurikaisen

fact of nature has for our everyday life and our basic actions, for our macroscopic world or the world in which our lives are lived. This basic correlatedness can only be made visible by great experimental effort and it is unclear how it relates to the macroscopic world.<sup>23</sup> The correlatedness is being destroyed by what in quantummechanics is known as measuring process, which makes things real as it were. In that sense our world of separated things and elements, and possibly also our world of separated subjects could be a secondary, derived world. The basic reality of connectedness which enables this world is ontologically primary, but epistemologically only secondary. This situation would provide an excellent basis for scientific understanding and spiritual reinterpretation of the original spiritual teaching of a deeper connectedness of all beings. With few exceptions this situation seems to have gone unnoticed by Christian theologians and scholars of religion. But this would be the move towards a new world view, in which spiritual experience and scientific knowledge would not have to stand unconnected next to each other. It would be the insight into the basic unity of the world on a primary level, out of which secondarily individual elements, things and subjects arise.

### *Relativity of the Ego*

A second important element in such a new world view would be the relativity of the individual ego. It is the topic and the aim of every spiritual tradition to dissolve the central role the ego has to take in everyday life, if a deeper spiritual reality is to be experienced, or that this central role of the ego is necessarily dissolved if this experience enters into consciousness, be it sought after actively or by accident. In the Buddhist tradition this is known by the saying 'enlightenment as the insight into the having no substance of the every-day ego [...] insight into the deeper Buddha nature'.<sup>24</sup> In the Christian tradition the same topic is known by the theme of selflessness. While in the Christian culture selflessness over the past 2000 years has been viewed mainly under moral-ethical aspects as

---

80-vuotisp), Helsinki 1996; H. Atmanspacher, H. Römer, & H. Walach, 'Weak quantum theory: Complementarity and entanglement in physics and beyond', in: *Foundations of Physics* 32 (2002), 379-406; J. Audretsch, 'Die Unvermeidbarkeit der Quantenmechanik', in: K. Mainzer & W. Schirmacher (Eds.), *Quanten, Chaos und Dämonen*, Mannheim 1994; A. Elby, 'Should we explain the EPR correlations causally?', in: *Philosophy of Science* 59 (1992), 16-25; M.A. Rowe et al., 'Experimental violation of a Bell's inequality with efficient detection', in: *Nature* 409 (2001), 791-794; A. Zeilinger, 'A foundational principle for quantum mechanics', in: *Foundation of Physics* 29 (1999), 631-643.

<sup>23</sup> G. Mahler, 'Was heisst "nicht-klassisch"? Quantentheorie – und darüber hinaus', in: *Zeitschrift für Parapsychologie und Grenzgebiete der Psychologie* 38 (1996), 92-107.

<sup>24</sup> Habito, 'Buddhist philosophy as experiential path', 128.

belonging to the realm of action, meaning that the own ego has to be put after the needs of others, in my view, the basis for this is a similar experience, namely that the individual subject has to be seen as relative to the world, to other persons, and to the final reality. This experience has found its expression in the words of the hymn of the letters to the Philippians in which we read: 'Christ emptied Himself'. In the Greek original this reads 'Christos ekenosen heautou', using a genitive which can be understood reflexively, and can then be translated as 'He emptied Himself of Himself'. This sentence qualifies the experience of the death of Jesus and his subsequent resurrection. It would be an interesting undertaking to interpret this historical event under the symbolical aspect of the loss of self and the entering into a higher reality, not as an alternative to a historical interpretation, but to enlarge the view. It certainly would not contradict the biblical text. Therefore, there seems to be a commonality between different spiritual traditions: The central role of the experience of the transcending of the ego.<sup>25</sup>

It is interesting that this is also an important aspect of modern scientific insight that the ego as we normally see it is insubstantial and has a derived existence. This fact can be gleaned from the insights of modern brain research which does not attribute any importance to any centralized areas of activity to understand complex cognitions.<sup>26</sup> The experience of a central governing ego seems to be rather derivative and secondary as an emerging phenomenon of a complex neuronal network, and not the basic preconditions for its functioning.<sup>27</sup> In that point scientific theories seem to agree with some aspect of spiritual experience. For the Buddhist tradition of Theravada Buddhism this has recently been pointed out by Varela, Thompson and Rosch.<sup>28</sup>

Another important realm of knowledge in this direction comes from psychology: Infant research as well as research of systems dynamics and therapy seem to show that the subject of interactions is variable and is not restricted to single persons.<sup>29</sup> For example, early interactions between mother and child show that

<sup>25</sup> B. Roberts, *The experience of no-self: A contemplative journey*, Boulder-London 1984; S. Segal, *Kollision mit der Unendlichkeit: Ein Leben jenseits des persönlichen Selbst*, Bielefeld 1997.

<sup>26</sup> F. Caspar, 'A connectionist view of psychotherapy', in: D.J. Stein & J. Ludik (Eds.), *Neural networks and psychopathology*, Cambridge 1998; F. Caspar, T. Rothenfluh, & Z. Segal, 'The appeal of connectionism for clinical psychology', in: *Clinical Psychology Review* 12 (1992), 719-762; G. Roth, 'Erkenntnis und Realität: Das reale Gehirn und seine Wirklichkeit', in: S.J. Schmidt (Ed.), *Der Diskurs des Radikalen Konstruktivismus*, Frankfurt 1987; G. Roth, *Das Gehirn und seine Wirklichkeit. Kognitive Neurobiologie und ihre philosophischen Konsequenzen*, Frankfurt 1997.

<sup>27</sup> M.E. Hyland, 'The intelligent body and its discontents', in: *Journal of Health Psychology* 7 (2002), 21-32.

<sup>28</sup> F.J. Varela, E. Thompson, & E. Rosch, *The embodied mind: Cognitive science and human experience*, Cambridge 1991.

<sup>29</sup> P. Fonagy, M. Steele, H. Steele, G.S. Moran, & A.C. Higgitt, 'The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment', in:

mother and child are not different, separated subjects entering into interactions with each other, but that there seems to be a new unity, the mother-child dyad, which has its own rules and interdependencies. Similar experiences that individual boundaries seem to be flexible and variable are reported by clinicians.<sup>30</sup> In systemic work it can happen that single persons who are the representatives of others in a systems context report cognitions, impulses, emotions, which obviously are not their own, but a part of the family system under exploration.<sup>31</sup> These rather anecdotal observations have to be documented more carefully in a scientific manner before we can really use these phenomena for scientific conclusions.

Such an experience of fluidity of subjective individual borders is also at the basis of the clinical experience of counter-transference. While the notion of transference addresses the fact that a therapist in a close therapeutic situation activates contents in the patient in such a way that the patient understands his own life situation in the light of the therapeutic relationship,<sup>32</sup> the notion of counter-transference addresses something different. By counter-transference we mean that the therapist partially experiences contents as his own, which are in fact being transferred from the patient to him.<sup>33</sup> These contents may be bizarre emotions, strange cognitions, or strong impulses. It is part of therapeutic interactions

---

*Infant Mental Health Journal* 13 (1991), 200-217; P. Fonagy & M. Target, 'Understanding the violent patient: the use of the body and the role of the father', in: *International Journal of Psycho-Analysis* 76 (1995), 487-501; T. Gausson & R. Stratton, 'Beyond the milestone model: a systems framework for alternative infant assessment procedures', in: *Child Care, Health and Development* 11 (1985), 131-150; M. Jasnow & S. Feldstein, 'Adult-like temporal characteristics of mother-infant vocal interactions', in: *Child Development* 57 (1986), 754-761; J. Kagan, 'The form of early development', in: *Archives of General Psychiatry* 36 (1979), 1047-1954; M.S. Mahler, F. Pine & A. Bergamn, *Die psychische Geburt des Menschen: Symbiose und Individuation*, Frankfurt 1978; D.M. Stack & D.W. Muir, 'Adult tactile stimulation during face-to-face interactions modulates five-month-olds' affect and attention', in: *Child Development* 63 (1992), 1509-1525.

<sup>30</sup> I. Sparrer, & M. Varga von Kibéd, 'Vom Familienstellen zur systemischen Strukturaufstellungsarbeit', in: G. Weber (Ed.), *Praxis des Familien-Stellens: Beiträge zu systemischen Lösungen nach Bert Hellinger*, Heidelberg 1998; M. Varga von Kibéd, 'Bemerkungen über philosophische Grundlagen und methodische Voraussetzungen der systemischen Aufstellungsarbeit', in: Weber, *Praxis des Familien-Stellens*.

<sup>31</sup> W. Häuser, R. Klein, & B. Schmitt-Keller, 'Familienaufstellen mit Bert Hellinger aus der Sicht teilnehmender KlientInnen und ihrer TherapeutInnen: Eine Einjahreskatamnese', in: Weber, *Praxis des Familien-Stellens*; R. Langlotz, 'Die Aufgabe des Therapeuten beim Familien-Stellen', in: Weber, *Praxis des Familien-Stellens*.

<sup>32</sup> S.M. Andersen, & N.S. Glassman, 'Responding to significant others when they are not there: Effects on interpersonal inference, motivation, and affect', in: R.M. Sorrentino, & E.T. Higgins (Eds.), *Handbook of motivation and cognition*. Vol. 3, New York 1996.

<sup>33</sup> P. Heimann, 'On countertransference', in: *International Journal of Psychoanalysis* 31 (1950), 9-15; Stirn, A., 'Gegenübertragung', in: *Psychotherapeut* 47 (2002), 48-58.

and training to use these contents accordingly. In our context it is important to realize that in such a close encounter it is apparently possible that the boundaries of subjectivity between therapist and patient can be partially suspended.

All these experiences and notions from the scientific context seem to suggest a view which is similar to the one expressed by spiritual traditions. For they show that our everyday notion of a fixed, surviving, and competent ego is rather shaky. The ego seems to be of a derived nature, variable in its extension and in no way central for the psychological and cognitive functioning. But it is important to understand that in the spiritual experience of selflessness there is always a deeper, wider, or more substantial encounter of self to what is being experienced. In that sense the experience of ego-lessness does not only address losing the personal or small ego, but also finding a broader way of being in the world, or a larger self. It would be a task for future research to qualify the differences and boundaries of those two experiences of the relativity of the ego, namely the scientific and the spiritual one.

### *Relativity of Time*

A third and central point of every spiritual basic experience is that of the relativity of time. Time is normally seen as a linear, and somewhat continuous and objective event. Gebser has acknowledged timelessness as an important mark of integral consciousness. Descriptions of spiritual experiences from diverse traditions imply that time is experienced differently during such an experience. Ethnographical descriptions of yogis or local saints report that these people can remain in the same posture for many hours without reporting subjective boredom or other such thing, and that they seem rather to experience fullness.<sup>34</sup> We also know this from reports about *kensho* or *satori* from the Buddhist tradition.<sup>35</sup> Here also linear time seems to be stopped and the experience of fulfilled presence seems to take over. This experience of timelessness or the fullness of time is also one of the core essences of the Christian experience.<sup>36</sup> The chiffre from the New Testament for this experience is the talk of the Evangelists of the *kairos*, the fulfilled moment, which has been reached. And it was the repeated experience of Christian mystics that they talked about the presence of eternity in the now, which they called the *nunc stans*, the everlasting now.<sup>37</sup>

<sup>34</sup> B. Anand, G.S. China, & B. Singh, 'Some aspects of EEG studies in Yogis', in: *Electroencephalography and Clinical Neurophysiology* 13 (1961), 452-456.

<sup>35</sup> Kapleau, *Die drei Pfeiler des Zen*.

<sup>36</sup> Augustine, *Confessions*, Oxford 1992.

<sup>37</sup> Meister Eckhart, *Deutsche Predigten und Traktate*, München 1963; S. Ueda, 'Der Zen-Buddhismus als "Nicht-Mystik" unter besonderer Berücksichtigung des Vergleichs zur Mystik Meister

Time is also becoming a topic and problem in modern science. On the one hand we see the importance attributed to different time scales when we are addressing the change of our ecological environment, ecology of time.<sup>38</sup> This means that different biological or natural systems have completely different time scales, which they need to develop, regenerate or to interact with other systems. Within the physical theories time has been made an own dimension by the 'theory of relativity' which does not have an absolute, but a relative value.<sup>39</sup> The 'special theory of relativity' which introduces the speed of light as the final speed in the universe enters time as a unit into our physical world view, but as a relative unit which has to be seen in relation with the speed of light. Theoretically, we could also conceive of tachyons, meaning particles which are quicker than light, and which would allow for a change of the arrow of time as well as the change of the experience of time depending on neurophysiological processes. Neurophysiological experiments have shown that how we experience time, and the binding of time, depends on neuronal patterns.<sup>40</sup> Therefore, it is also imaginable that changed neuronal processes can also change the experience of time, and therefore individual time itself. The whole modern history of science could be seen in the context of relativizing and subjectivizing the units of time. And a new attempt to derive time shows that it is primarily inner subjective time that gives rise to physical, linear time.<sup>41</sup>

For our practical, everyday life it is important to realize that a change in the way we deal with time can be the result of changed experiences of self and the body, as they are known from spiritual techniques and exercises like meditation. The experiences of practiced teachers in various disciplines show that intensively experienced time, which is the signature of enlightenment experience, can be transported through prolonged exercise into everyday consciousness. Meanwhile this experience has gained some popularity through the catchword

---

Eckharts', in: G. Schulz (Ed.), *Transparente Welt: Festschrift für Jean Gebser*, Bern-Stuttgart 1965; S. Ueda, *Die Gottesgeburt in der Seele und der Durchbruch zur Gottheit*, Gütersloh 1965.

<sup>38</sup> K. Kümmerer, 'Die Bedeutung der Zeit. Teil 1: Die Vernachlässigung der Zeit in den Umweltwissenschaften. Beispiele-Folgen-Perspektiven', in: *Zeitschrift für Umweltchemie und Ökotoxikologie* 9 (1997), 49-54; K. Kümmerer & M. Held, 'Die Bedeutung der Zeit. Teil 2: Die Umweltwissenschaften im Kontext von Zeit: Begriffe unter dem Aspekt der Zeit', in: idem, 169-178; K. Kümmerer & M. Held, 'Die Bedeutung der Zeit. Teil 3: Die Vielfalt der Zeiten in den Umweltwissenschaften: Herausforderung und Hilfe', in: idem, 283-290.

<sup>39</sup> H. Reichenbach, *The philosophy of space and time*, New York 1957.

<sup>40</sup> A.K. Engel, P.R. Roelfsema, P. König, & W. Singer, 'Neurophysiological relevance of time', in: H. Atmanspacher, & E. Ruhnau (Eds.), *Time, temporality, now: Experiencing time and concepts of time in an interdisciplinary perspective*, Berlin etc. 1997; E. Pöppel, 'The brain's way to create "nowness"', in: Atmanspacher & Ruhnau, *Time, temporality, now*.

<sup>41</sup> H. Römer, 'Weak quantum theory and the emergence of time', in: *Mind and Matter* 2 (2004), 105-125. (<http://arxiv.org/abs/physics/0302005>)

mindfulness.<sup>42</sup> But scientific data also support this supposition. In his experiments Gary Schwartz has shown that changed experiences of body and space perception also alter time perception.<sup>43</sup> The *nunc stans* of the mystics, the full experience of the moment are all signs of the fact that a changed time perception and timelessness, as postulated by Gebser for the integral stage of consciousness, could indeed be the foundation for a new world and world view.

### *Towards a Unity of Matter and Mind*

Finally, I would like to point to a last important topic: the Cartesian cut, the cut between the material world and consciousness, or between matter and mind, seems to be blurred.<sup>44</sup> Even though ontological dualism, which evolved from Cartesian philosophy, is only rarely supported by scientists nowadays, methodological dualism has remained, and is basic to all modern concepts of science. The Cartesian cut which separates an inner from an outer world, mind from matter is not perfect. It is also a common denominator between different spiritual traditions that they point to the basic unity of being, and, thus, also to the unity of consciousness and matter. Although there are a plethora of concepts in spiritual traditions, which also seem to contradict each other, there still seems to be a basic notion that as a last reality there is unity between material and spiritual processes. It goes without saying that this also entails a reinterpretation of the notion of matter.

There is some suggestion that this cut between the material and mental world is not perfect. Empirical suggestions from parapsychological experimental research show for instance that mental events like wishes, intentions or purposes, can be correlated with material processes under certain conditions.<sup>45</sup> This does not mean that these interactions between mental and material processes are characterized by influencing matter through consciousness; they could be mere correlations. But still the result of these experiments seems to be that material

<sup>42</sup> N. Buchheld & H. Walach, 'Die historischen Wurzeln der Achtsamkeitsmeditation: Ein Exkurs in Buddhismus und christliche Mystik', in: T. Heidenreich & J. Michalak (Eds.), *Achtsamkeit und Akzeptanz in der Psychotherapie: Ein Handbuch*, Tübingen 2004, 25-46.

<sup>43</sup> G.E. Schwartz, 'Personality and the unification of psychology and modern physics: A systems approach', in: J. Aronoff, H.I. Rabin & R.A. Zucke (Eds.), *The emergence of personality*, New York 1987.

<sup>44</sup> H. Atmanspacher, 'Complexity and meaning as a bridge across the Cartesian cut', in: *Journal of Consciousness Studies* 1 (1994), 168-181.

<sup>45</sup> D.L. Delanoy, 'Experimental evidence suggestive of anomalous consciousness interactions', in: D.N. Ghista (Ed.), *Biomedical and life physics: Proceedings of the Second Gauss Symposium*, Braunschweig 1996; S. Schmidt, R. Schneider, J. Utts, & H. Walach, 'Remote intention on electrodermal activity – Two meta-analyses', in: *British Journal of Psychology* 95 (2004), 235-247.

and mental reality can interact under certain conditions. Controlled clinical trials of distant intentionality or prayer seem to show that at least sometimes distant intentionality can affect physiological functioning.<sup>46</sup> Experimental evidence suggests that a distant and shielded subject can intentionally influence the autonomic arousal of another subject, at least sometimes and to some extent.<sup>47</sup> Many ethnographical descriptions also suggest that such processes can happen spontaneously. Thus, at least occasionally, it seems to be possible that there is a direct bridge between the mental and the physical, and that the Cartesian cut is not complete.<sup>48</sup>

C.G. Jung tried to develop a model for such direct interactions between psychological and physical processes together with the physicist Wolfgang Pauli, and published it by the name of 'synchronicity'.<sup>49</sup> In his terminology, synchronistic events are events in which a material reality develops or acts in a meaningful way corresponding to a psychological reality without a direct causal interaction. Often such events happen when there is a strong psychological activity or emergency situation, which according to Jung 'activates an archetype', calling for a solution, which is not available for the subject at the moment. Every now and then it happens that the outer material world corresponds in a meaningful way. This could be the accidental meeting of information or persons who are central for the solution of the problem. It could be the coincidence of some simple events which in themselves are not special but create a very intriguing ensemble of events. It is the commonality of such experiences and situations that they could also be, and very likely are, accidental events, and the classical explanation for this happening would be the over-selection of a situation by keen human attention.

<sup>46</sup> J.A. Astin, E. Harkness, & E. Ernst, 'The efficacy of "distant healing": A systematic review of randomized trials', in: *Annals of Internal Medicine* 132 (2000), 903-910; W.Y. Cha, D.P. Wirth, & R.A. Lobo, 'Does prayer influence the success of in vitro fertilization-embryo transfer? Report of a masked, randomized trial', in: *Journal of Reproductive Medicine* 46 (2001), 781-787; W.S. Harris et al., 'A randomized, controlled trial of the effects of remote, intercessory prayer on outcomes in patients admitted to the coronary care unit', in: *Archives of Internal Medicine* 159 (1999), 2273-2278; F. Sicher et al., 'A randomized double-blind study of the effect of distant healing in a population with advanced AIDS: Report of a small scale study', in: *Western Journal of Medicine* 169 (1998), 356-363.

<sup>47</sup> Schmidt et al., 'Remote intention on electrodermal activity'.

<sup>48</sup> H. Walach & S. Schmidt, 'Repairing Plato's life boat with Ockham's razor: The important function of research in anomalies for mainstream science', in: *Journal of Consciousness Studies* 12 (2005), 52-70.

<sup>49</sup> C.G. Jung, 'Synchronizität als ein Prinzip akausalser Zusammenhänge', in: C.G. Jung & W. Pauli (Eds.), *Naturerklärung und Psyche*, Zürich 1952; V. Mansfield, *Synchronicity, science, and soul-making: Understanding Jungian synchronicity through physics, Buddhism, and philosophy*, Chicago-La Salle (Ill.) 1995; W. Pauli, 'Der Einfluss archetypischer Vorstellungen auf die Bildung naturwissenschaftlicher Theorien bei Kepler', in: Jung & Pauli, *Naturerklärung und Psyche*.

It is difficult to decide on empirical grounds whether nature itself acts meaningfully, or whether human attention selects events, because it is difficult to study phenomena of synchronicity systematically. There are empirical approaches suggesting that it is not helpful to address those phenomena as pure accidents.<sup>50</sup> Jung himself described the case of a patient who got stuck in therapy. She had a dream about a scarabeus beetle she did not understand. Jung pointed out to her that the scarabeus is a symbol for death and resurrection in Egyptian mythology and that the dream probably meant that her mental stance should die and be resurrected as a new one. The patient did not understand what Jung was referring to, when something plunged against the window, and on picking it up Jung saw that it was a rose beetle, which is the closest relative in our climate to the Egyptian scarabeus. Jung presented this beetle to the lady, saying 'here is your scarab', and relates that this experience of the physical reality meeting her inner world completely changed the patient's attitude. This story represents a good example for a synchronistic event: There is a psychological difficulty and we have a seemingly random event in the outer world, the rose beetle that plunges against the window. According to Jung, these events are not related causally, but by their meaning. It would be wrong to say that the mental state of the patient had changed the material world in the way that the beetle was produced, or its flying against the window was caused. But it is nevertheless interesting to observe the correlation between these two events, whose meaning is connected and whose effect is important, namely on the attitude of the patient. Jung and Pauli expressed the opinion that synchronistic events are a complementary category to causal events in space-time. They underline this at various places in their exchange of letters as well as in their jointly published book.<sup>51</sup> Jung even was of the opinion that possibly synchronistic relationships between the psychological and material world could be more frequent than we normally think. If this were true, Jung would have described a category of exchanges between mental and physical correlations that are not causal, which nevertheless ignore the Cartesian cut, and point toward a basic connectedness of reality. Jung himself had such a view when he said that there was a common basic reality, which he called *unus mundus*, from which such correlated processes arise.

These elements – the basic experience of unity, the relativity of the ego concept, the intensifying and relativizing of time, and the transcendence of the dualism

<sup>50</sup> T.C. Rowe et al., 'Motivation and meaningful coincidence: A further examination of synchronicity', in: *Journal of Scientific Exploration* 11 (1997), 487-498; T.C. Rowe & D.B. Henderson, 'Establishing prevalence of commonalities in randomly paired individuals as a method for assessing synchronicity', in: *Journal of Scientific Exploration* 9 (1995), 323-330.

<sup>51</sup> C.A. Meier, *Wolfgang Pauli und C.G. Jung: Ein Briefwechsel 1932-1958*, Heidelberg 1992.

between mental and physical processes – these elements are only outlines of first approaches. They cannot solve all problems or answer all questions at once. They can only point towards the fact that there are some very interesting similarities between spiritual world views and scientific explanations of the world. This would be the point where the dialogue between different disciplines and traditions would have to begin and would be worthwhile. Spiritual and religious experience is always in need of interpretation. For it speaks in images, it uses paradoxes in language, and therefore needs translations. In earlier times, the task of theology was always to interpret Christian experience against the background of the actual philosophical and scientific views of the era, to reconcile the two and to understand how those two realms interact. Scholastic philosophy has been the last real attempt to do this. Later attempts only tried to revive this last consensus between theology and natural sciences. Apart from Teilhard de Chardin in modern times, who tried to bridge the gap between modern evolutionary theory and theology, there were not many serious attempts by theologians to take modern science seriously and interpret it in terms of theology. The official teachings of the churches do not really make any attempt to do this. The points mentioned above could be seen as pillars bridging the gap and joining the two river beds and these might not be as far apart as we believe. It at least seems plausible that modern scientific insights are not in contrast with spiritual experiences, let alone disprove them. On the contrary, they rather seem to support them. It is more a question of possessing deeper knowledge about both the scientific disciplines and spiritual traditions to be able to understand and appreciate the commonalities and find ways of interchange. In that sense theologians would be called upon to study science and to start a dialogue with scientists and spiritual teachers to understand the commonalities.

## CONCLUSION

Spiritual experience, be it of Christian or other origin, must always be interpreted against the background of the culture and language of the time. Without new, and thus deeper understanding, as pointed out by Gadamer's hermeneutics<sup>52</sup> we will have no opportunity to mediate the Christian basic experience in a plausible way for people in our times, whose mental stance, training, and knowledge is rooted in the mental world of the early 21<sup>st</sup> century. At the same time, only if spirituality is again seen as worthwhile by scientists, will there be a chance for a world view that is both scientifically sound and open towards spiritual experiences.

---

<sup>52</sup> H.G. Gadamer, *Wahrheit und Methode: Grundzüge einer philosophischen Hermeneutik*, Tübingen 1975.

## BIBLIOGRAPHY

- Anand, B., G.S. China, & B. Singh, 'Some aspects of EEG studies in Yogis', in: *Electroencephalography and Clinical Neurophysiology* 13 (1961), 452-456.
- Andersen, S.M., & N.S. Glassman, 'Responding to significant others when they are not there: Effects on interpersonal inference, motivation, and affect', in: R.M. Sorrentino, & E.T. Higgins (Eds.), *Handbook of motivation and cognition*, Vol. 3, New York: Guilford, 1996.
- Astin, J.A., E. Harkness, & E. Ernst, 'The efficacy of "distant healing": A systematic review of randomized trials', in: *Annals of Internal Medicine* 132 (2000), 903-910.
- Atmanspacher, H., 'Complexity and meaning as a bridge across the Cartesian cut', in: *Journal of Consciousness Studies* 1 (1994), 168-181.
- Atmanspacher, H., 'Metaphysics taken literally', in: U. Ketvel (Ed.), *Festschrift in honor of K.V. Laurikainen's 80<sup>th</sup> birthday* (Vastakohtien todelisuus – Juhlakirja professori K.V. Laurikaisen 80-vuotisp), Helsinki: University of Helsinki Press, 1996, 39-49.
- Atmanspacher, H., H. Römer, & H. Walach, 'Weak quantum theory: Complementarity and entanglement in physics and beyond', in: *Foundations of Physics* 32 (2002), 379-406.
- Audretsch, J., 'Die Unvermeidbarkeit der Quantenmechanik', in: K. Mainzer & W. Schirmacher (Eds.), *Quanten, Chaos und Dämonen*, Mannheim: BI-Wissenschaftsverlag, 1994, 75-106.
- Augustine, *Confessions*, Oxford: Oxford University Press, 1992.
- Barstad, N.K., 'Welten aussen und innen: asiatische Monde, westliche Tage, und Evolution als Nachvollzug im Leben und Werk Jean Gebbers', in: *Beiträge zur Integralen Weltsicht* 10 (1995), 69-98.
- Beckermann, A., 'Aristoteles, Descartes und die Beziehungen zwischen philosophischer Psychologie und KI-Forschung', in: E. Pöppel (Ed.), *Gehirn und Bewusstsein*, Weinheim: VCH Verlagsgesellschaft, 1989, 105-123.
- Beierwaltes, W., *Platonismus und Idealismus*, Frankfurt 1972.
- Buchheld, N., & H. Walach, 'Die historischen Wurzeln der Achtsamkeitsmeditation: Ein Exkurs in Buddhismus und christliche Mystik', in: T. Heidenreich & J. Michalak (Eds.), *Achtsamkeit und Akzeptanz in der Psychotherapie. Ein Handbuch*, Tübingen: dgvt, 2004, 25-46.
- Caspar, F., 'A connectionist view of psychotherapy', in: D.J. Stein & J. Ludik (Eds.), *Neural networks and psychopathology*, Cambridge: Cambridge University Press, 1998, 88-131.
- Caspar, F., T. Rothenfluh, & Z. Segal, 'The appeal of connectionism for clinical psychology', in: *Clinical Psychology Review* 12 (1992), 719-762.
- Cha, W.Y., D.P. Wirth, & R.A. Lobo, 'Does prayer influence the success of in vitro fertilization-embryo transfer? Report of a masked, randomized trial', in: *Journal of Reproductive Medicine* 46 (2001), 781-787.
- Chesterton, G.K., *Thomas von Aquin: Der Heilige mit dem gesunden Menschenverstand*, Heidelberg: Herle, 1956.
- Clévenot, M., *Der Triumph des Kreuzes*, Brig: Exodus, 1988.
- Clévenot, M., *Die Christen und die Staatsmacht. Geschichte des Christentums im II. und III. Jahrhundert*, Brig: Exodus, 1988.

- Clévenot, M., *Von Jerusalem nach Rom. Geschichte des Christentums im I. Jahrhundert*, Brig: Exodus, 1988.
- Collingwood, R.G., *An essay on metaphysics*, Oxford: Clarendon Press, 1998 (orig. publ. 1940)
- Crombie, A.C., *Robert Grosseteste and the origins of experimental science 1100-1700*, Oxford: Clarendon, 1953.
- Delanoy, D.L., 'Experimental evidence suggestive of anomalous consciousness interactions', in: D.N. Ghista (Ed.), *Biomedical and life physics: Proceedings of the Second Gauss Symposium*, Braunschweig: Vieweg, 1996.
- Devlin, K.G., 'Kurt Gödel – Separating truth from proof in mathematics', in: *Science* 298 (2002), 1899-1900.
- Douglas-Klotz, N., *The hidden Gospel: Decoding the spiritual message of the Aramaic Jesus*, Wheaton, IL: Quest Books, 1999.
- Elby, A., 'Should we explain the EPR correlations causally?', in: *Philosophy of Science* 59 (1992), 16-25.
- Engel, A.K., P.R. Roelfsema, P. König, & W. Singer, 'Neurophysiological relevance of time', in: H. Atmanspacher, & E. Ruhnau (Eds.), *Time, temporality, now: Experiencing time and concepts of time in an interdisciplinary perspective*, Berlin etc.: Springer, 1997, 133-157.
- Enomiya-Lassalle, H.M., *Zen und christliche Spiritualität*, München: Kösel, 1987.
- Fonagy, P., M. Steele, H. Steele, G.S. Moran, & A.C. Higgitt, 'The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment', in: *Infant Mental Health Journal* 13 (1991), 200-217.
- Fonagy, P. & M. Target, 'Understanding the violent patient: the use of the body and the role of the father', in: *International Journal of Psycho-Analysis* 76 (1995), 487-501.
- Gadamer, H.G., *Wahrheit und Methode: Grundzüge einer philosophischen Hermeneutik*, Tübingen: Mohr, 1975 (4. Aufl.).
- Gaussen, T., & R. Stratton, 'Beyond the milestone model: a systems framework for alternative infant assessment procedures', in: *Child Care, Health and Development* 11 (1985), 131-150.
- Gebser, J., *The ever-present origin*, Athens: Ohio University Press, 1985.
- Gilson, E., *History of Christian philosophy in the Middle Ages*, London: Sheed & Ward, 1955.
- Grabmann, M., *Thomas von Aquin: Persönlichkeit und Gedankenwelt*, München: Kösel, 1946.
- Habito, R.L.F., 'Buddhist philosophy as experiential path. A journey through the Suta Nipata', in: *International Philosophical Quarterly* 28 (1988), 125-139.
- Harris, W.S., M. Gowda, J.W. Kolb, C.P. Strychacz, J.L. Vacek, P.G. Jones, A. Forker, J.H. O'Keefe, & B.D. McCallister, 'A randomized, controlled trial of the effects of remote, intercessory prayer on outcomes in patients admitted to the coronary care unit', in: *Archives of Internal Medicine* 159 (1999), 2273-2278.
- Häuser, W., R. Klein, & B. Schmitt-Keller, 'Familienaufstellen mit Bert Hellinger aus der Sicht teilnehmender KlientInnen und ihrer TherapeutInnen. Eine Einjahreskatamnese', in: G. Weber (Ed.), *Praxis des Familien-Stellens: Beiträge zu systemischen Lösungen nach Bert Hellinger*, Heidelberg: Carl-Auer-Systeme, 1998, 478-487.

- Heimann, P., 'On countertransference', in: *International Journal of Psychoanalysis* 31 (1950), 9-15.
- Hyland, M.E., 'The intelligent body and its discontents', in: *Journal of Health Psychology* 7 (2002), 21-32.
- Ivanka, E. v., *Plato Christianus: Übernahme und Umgestaltung des Platonismus durch die Väter*. Einsiedeln: Johannes Verlag 1964.
- Jasnow, M., & S. Feldstein, 'Adult-like temporal characteristics of mother-infant vocal interactions', in: *Child Development* 57 (1986), 754-761.
- Jung, C.G., 'Synchronizität als ein Prinzip akausaler Zusammenhänge', in: C.G. Jung & W. Pauli (Eds.), *Naturerklärung und Psyche*, Zürich: Rascher, 1952, 1-107.
- Kagan, J., 'The form of early development', in: *Archives of General Psychiatry* 36 (1979), 1047-1954.
- Kalff, M., 'The negation of ego in Tibetan Buddhism and Jungian psychology', in: *Journal of Transpersonal Psychology* 15 (1983), 103-124.
- Kapleau, P., *Die drei Pfeiler des Zen – Lehre, Übung, Erleuchtung*, München: Barth, 1981.
- Katz, S.T. (Ed.), *Mysticism and language*, New York: Oxford University Press, 1992.
- Kümmerer, K., 'Die Bedeutung der Zeit. Teil 1: Die Vernachlässigung der Zeit in den Umweltwissenschaften. Beispiele-Folgen-Perspektiven', in: *Zeitschrift für Umweltchemie und Ökotoxikologie* 9 (1997), 49-54.
- Kümmerer, K., & M. Held, 'Die Bedeutung der Zeit. Teil 2: Die Umweltwissenschaften im Kontext von Zeit: Begriffe unter dem Aspekt der Zeit', in: *Zeitschrift für Umweltchemie und Ökotoxikologie* 9 (1997), 169-178.
- Kümmerer, K., & M. Held, 'Die Bedeutung der Zeit. Teil 3: Die Vielfalt der Zeiten in den Umweltwissenschaften: Herausforderung und Hilfe', in: *Zeitschrift für Umweltchemie und Ökotoxikologie* 9 (1997), 283-290.
- Langlotz, R., 'Die Aufgabe des Therapeuten beim Familien-Stellen', in: G. Weber (Ed.), *Praxis des Familien-Stellens: Beiträge zu systemischen Lösungen nach Bert Hellinger*, Heidelberg: Carl-Auer-Systeme, 1998.
- Leff, G., *William of Ockham: The metamorphosis of scholastic discourse*, Manchester: Manchester University Press, 1975.
- Leibniz, G.W., 'Monadologie', in: A. Buchenau & E. Cassirer (Eds.), *Hauptschriften zur Grundlegung der Philosophie*, vol. 2, Hamburg: Meiner, 1966, 435-456 (*Philosophische Bibliothek* 108).
- Mahler, G., 'Was heisst "nicht-klassisch"? Quantentheorie – und darüber hinaus', in: *Zeitschrift für Parapsychologie und Grenzgebiete der Psychologie* 38 (1996), 92-107.
- Mahler, M.S., F. Pine, & A. Bergamn, *Die psychische Geburt des Menschen: Symbiose und Individuation*, Frankfurt: Fischer, 1978.
- Mansfield, V., *Synchronicity, science, and soul-making: Understanding Jungian synchronicity through physics, Buddhism, and philosophy*, Chicago-La Salle, Ill.: Open Court, 1995.
- Meier, C.A., *Wolfgang Pauli und C.G. Jung: Ein Briefwechsel 1932-1958*, Heidelberg: Springer, 1992.
- Meister Eckhart, *Deutsche Predigten und Traktate*, München: Hanser, 1963.
- Odin, S., *Process-metaphysics and Hua-yen Buddhism: A critical study of cumulative penetration vs. interpenetration*, Albany: SUNY Press, 1982.
- Panofsky, E., *Renaissance and renaissances in Western art*, Stockholm: Almqvist & Wiksell, 1960.

- Pauli, W., 'Der Einfluss archetypischer Vorstellungen auf die Bildung naturwissenschaftlicher Theorien bei Kepler', in: C.G. Jung & W. Pauli (Eds.), *Naturerklärung und Psyche*, Zürich: Rascher, 1952, 109-167.
- Pöppel, E., 'The brain's way to create "nowness"', in: H. Atmanspacher & E. Ruhnau (Eds.), *Time, temporality, now: Experiencing time and concepts of time in an interdisciplinary perspective*, Berlin etc.: Springer, 1997, 107-120.
- Reich, K.H., 'The Chaldean definition, and example of the difficulties and the usefulness of thinking in terms of complementarity?', in: *Journal of Psychology and Theology* 18 (1990), 148-157.
- Reichenbach, H., *The philosophy of space and time*, New York: Dover, 1957.
- Roberts, B., *The experience of no-self: A contemplative journey*, Boulder-London: Shambhala, 1984.
- Römer, H., 'Weak quantum theory and the emergence of time', in: *Mind and Matter* 2 (2004), 105-125. <http://arxiv.org/abs/physics/0302005>
- Roth, G., 'Erkenntnis und Realität: Das reale Gehirn und seine Wirklichkeit', in: S.J. Schmidt (Ed.), *Der Diskurs des Radikalen Konstruktivismus*, Frankfurt: Suhrkamp, 1987, 229-255.
- Roth, G., *Das Gehirn und seine Wirklichkeit. Kognitive Neurobiologie und ihre philosophischen Konsequenzen*, Frankfurt: Suhrkamp, 1997.
- Rowe, M.A., D. Kielpinski, V. Meyer, C.A. Sackett, W.M. Itano, C. Monroe, & D.J. Wineland, 'Experimental violation of a Bell's inequality with efficient detection', in: *Nature* 409 (2001), 791-794.
- Rowe, T.C., & D.B. Henderson, 'Establishing prevalence of commonalities in randomly paired individuals as a method for assessing synchronicity', in: *Journal of Scientific Exploration* 9 (1995), 323-330.
- Rowe, T.C., J.M. Lemke, E.P. Pitsch, & D.B. Henderson, 'Motivation and meaningful coincidence: A further examination of synchronicity', in: *Journal of Scientific Exploration* 11 (1997), 487-498.
- Schmidt, S., R. Schneider, J. Utts, & H. Walach, 'Remote intention on electrodermal activity: Two meta-analyses', in: *British Journal of Psychology* 95 (2004), 235-247.
- Schopenhauer, A., 'Versuch über das Geistersehen', in: W. von Löhneysen (Ed.), *Parerga und Paralipomena: Kleine philosophische Schriften, Bd. 1*, Darmstadt: Wissenschaftliche Buchgesellschaft, 1968, 273-372 (Sämtliche Werke, vol. 4).
- Schwartz, G.E., 'Personality and the unification of psychology and modern physics: A systems approach', in: J. Aronoff, H.I. Rabin & R.A. Zucke (Eds.), *The emergence of personality*, New York: Springer, 1987.
- Segal, S., *Kollision mit der Unendlichkeit: Ein Leben jenseits des persönlichen Selbst*, Bielefeld: Context, 1997.
- Sicher, F., E. Targ, D. Moore, & H.S. Smith, 'A randomized double-blind study of the effect of distant healing in a population with advanced AIDS. Report of a small scale study', in: *Western Journal of Medicine* 169 (1998), 356-363.
- Sparrer, I., & M. Varga von Kibéd, 'Vom Familienstellen zur systemischen Strukturaufstellungsarbeit', in: G. Weber (Ed.), *Praxis des Familien-Stellens. Beiträge zu systemischen Lösungen nach Bert Hellinger*, Heidelberg: Carl-Auer-Systeme, 1998, 394-404.
- Stack, D.M., & D.W. Muir, 'Adult tactile stimulation during face-to-face interactions modulates five-month-olds' affect and attention', in: *Child Development* 63 (1992), 1509-1525.
- Stirn, A., 'Gegenübertragung', in: *Psychotherapeut* 47 (2002), 48-58.

- Suzuki, D.T., *The essence of Buddhism*, Kyoto: Hozokan, 1968.
- Ueda, S., 'Der Zen-Buddhismus als "Nicht-Mystik" unter besonderer Berücksichtigung des Vergleichs zur Mystik Meister Eckharts', in: G. Schulz (Ed.), *Transparente Welt: Festschrift für Jean Gebser* (pp. 291-313), Bern-Stuttgart: Huber, 1965.
- Ueda, S., *Die Gottesgeburt in der Seele und der Durchbruch zur Gottheit*, Gütersloh: Gütersloher Verlagshaus, 1965.
- Varela, F.J., E. Thompson, & E. Rosch, *The embodied mind: Cognitive science and human experience*, Cambridge, MA: MIT Press, 1991.
- Varga von Kibéd, M., 'Bemerkungen über philosophische Grundlagen und methodische Voraussetzungen der systemischen Aufstellungsarbeit', in: G. Weber (Ed.), *Praxis des Familien-Stellens. Beiträge zu systemischen Lösungen nach Bert Hellinger*, Heidelberg: Carl-Auer-Systeme, 1998, 51-60.
- Walach, H., & S. Schmidt, 'Repairing Plato's life boat with Ockham's razor: The important function of research in anomalies for mainstream science', in: *Journal of Consciousness Studies* 2005 (in print).
- Whitehead, A.N., *Process and reality* (corrected edition by D.R. Griffin & D.W. Sherburne), New York: Free Press, 1978 (1<sup>st</sup> publ. 1929).
- Zeilinger, A., 'A foundational principle for quantum mechanics', in: *Foundation of Physics* 29 (1999), 631-643.

#### SUMMARY

Our modern situation lacks a common philosophy or weltanschauung. This paper is a step towards some elements for such a philosophy. After analyzing the historical situation it describes some pivotal points which seem to be common to both a modern scientific world view, and to spiritual traditions. Among them are the basic experience of oneness and connectedness, the relativity of our common notion of an independent ego, relativity and intensification of time, and the transcendence of the duality between mental and material processes. All these elements are central to spiritual experiences within the Christian and Buddhist traditions alike, and become central areas of research in modern scientific endeavors. They could be the basis for a modern world view, which need not confront scientific knowledge with spiritual traditions and experience.

*Prof. Dr. Dr. Harald Walach (1957, Augsburg – Germany) is research professor in psychology at the University of Northampton. He is the co-ordinator of the European Office of the Samuelli Institute, president-elect of the International Society for Complementary Medical Research and the editor of the internationally oriented journal 'Research in Complementary Medicine/Forschende Komplementärmedizin'. His recent research interest is in the connection between spirituality, mindfulness and health. He is vice-president of the German Society for Transpersonal Psychology and Psychotherapy and developing a postgraduate training program for Transpersonal Psychology Consciousness Studies.*

*Address: University of Northampton, School of Social Sciences, Boughton Green Road, Northampton NN2 7AL, United Kingdom.*

*E-mail: harald.walach@northampton.ac.uk*