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# Secular spirituality – what it is. Why we need it. How to proceed

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#### ABSTRACT

Spirituality is the taboo topic of science. Science, in conjunction with political and secular enlightenment movements, was one of the major drivers of modern enlightenment, secularization and progress. Science has itself become a powerful meta-narrative. And part of this meta-narrative is a materialist view of the world. In such a model consciousness can only be secondary to material events in the brain. Yet, spiritual experiences are, as data show, quite common. Because the enlightenment movement was so successful, it has done away with all that is considered unnecessary baggage, including spirituality. Therefore, a new discourse needs to start that addresses this problem. This can only be done via the notion of *experience*. Spiritual experiences are experiences of a reality that is experienced to be beyond the ego and its immediate needs. They are the basis of religion that later starts out to interpret and ritualize these experiences. In them human consciousness seems to have direct access to the structure of reality as such. It is interesting to see that the scientific process has a similar mode of operation: it needs a deep, often creative insight into the structure behind data in order to create a theory. This process is called abduction and is, phenomenologically speaking, very similar to a spiritual experience or insight. Thus, spirituality and science might have more in common than one would think at first glance. This would entail that we need to develop a methodology of inner experience if we want to take spirituality scientifically seriously.

#### **KEYWORDS**

Spirituality; enlightenment; science; secularity; consciousness; experience

## Introduction: spirituality is the (scientific) taboo of our time

'*Expertus infallibiliter novit*' – 'He who has had an experience has infallible knowledge' John Duns Scotus (Scotus 1969; orig. 1891) *In Librum Primum Sententiarum, Distinctio Tertia, Quaestio IV*, 9:176)

In this paper I will propose and defend the thesis that spirituality is, scientifically speaking, *the* taboo of our time. In my view, a lot depends on whether we succeed, as a scientific community and as an enlightened culture, to integrate discourse, scholarship and public communication about spirituality into the framework of the scientific discourse. I will present a rough diagnosis, and I wish to point us along a possible way. A more elaborate version of my argument is available (Walach 2015).

#### A modern taboo and how it works

When Sigmund Freud published his seminal work on the interpretation of dreams in 1900 nothing happened at first. The worst possible outcome for any writer happened to him: he was being ignored (Mertens 2004). This might have had to do with his publishing previously, together with Breuer, the idea that so-called hysteric patients were suffering from traumata, mostly of a sexual nature, from incest and sexual abuse, and that these traumata can be revealed during hypnosis (Breuer and Freud 1909). The fact that sexuality should play any role whatsoever was an outrageous thought at the time. The idea of unconscious motives had been already made acceptable by romantic philosophy, literature and art, from Schelling to Carus (Whyte 1978). But that unconscious sexual motives are at the bottom of clinical symptoms, of artistic achievements, of striving for excellence, of religion and culture, this was a preposterous claim. Initially it was ignored. Later it was heavily fought. Nowadays, everyone knows it and does not understand why there was a fuss when the idea was first mentioned. It followed the 'three stages of truths' that are frequently credited to Schopenhauer.<sup>1</sup> Freud touched on the taboo of sexuality in modern societies, not only by mentioning it, but by claiming that it was a powerful motive in everybody's lives and strivings, adding a further narcissistic humiliation to mankind. After mankind had been dethroned from being at the centre of the cosmos by Galilei, from crown of the creation to just another ape by Darwin, mankind had to face the potential fact that all those heroic motives and deeds might be just reflections of this base need of procreation and lust (Ellenberger 1970).

Why was sexuality a taboo at the time? Freud's theory had to work against a largely unconscious cultural consensus about the power of human capabilities and the primacy of the conscious mind. Collingwood (1998, orig. 1940) had coined the term 'absolute presuppositions' for such a set of beliefs that are culturally mediated, largely unconscious and form something like a collective axiomatic system within science and culture. Kuhn (1962) later used this thought and called such sets of presuppositions a 'paradigm'. In that sense, Freud had to work against the absolute presuppositions, or the paradigm, of human conscious and heroic motives. The taboo was about even conceiving of something like unconscious motives, let alone base ones that are associated with mere animal lust. The taboo worked by ignoring first the ideas, second the man who held them, and third the movement that discussed and disseminated them. Freud was never formally made a chair, although his credentials were certainly sufficient. The psychoanalytic movement was banned from universities for a long time, and can hardly be found in any psychology department at universities around the world even today.

#### Spirituality: the next taboo

My claim is that, similar to sexuality's status as a generic taboo topic, we have today a comparable situation. The topic is spirituality, and it is under a taboo like sexuality at the beginning of the 20th century. The difference is: The taboo is largely relevant only for

<sup>&</sup>lt;sup>1</sup> All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as selfevident'. For discussion about the origin and subsequent use of this idea, including whether or not it should be attributed to Schopenhauer, see https://cs.uwaterloo.ca/~shallit/Papers/stages.pdf [accessed 15/01/2017].

those working within academia and science, and not for the population at large. But a taboo it nevertheless is. I would like to substantiate this claim phenomenologically, factually, and historically.

#### Phenomenology

Phenomenologically speaking, spirituality is a taboo topic within the intellectual academic discourse of Western societies. Anyone leafing through modern magazines or newspapers will find a lot about the latest breakthrough in astronomy, medicine, or psychology. But hardly ever does one see an article about important spiritual insights of scientists or intellectuals. The archetypical intellectuals of today are agnostic and, if they are not, keep their mouths shut because topics around spirituality do not befit intellectual discourse. Religion and spirituality are private. While it is perfectly alright to come out as homosexual or bisexual or asexual, or as being sexually undefined, and discuss all these matters, even in university meetings, it would seem utterly indecent to discuss matters of religious beliefs or spiritual experiences within formal academic meetings or as topics of scientific research, except in a descriptive and reductive way, or within specialized groups that form intellectual ecospheres of their own. While I agree that there should be privacy around some topics, it is nevertheless interesting to see that in today's voyeuristic culture nearly all private topics can be discussed openly and publicly, but spirituality is not one of them.

#### Facts

Factually, I would like to present some pertinent data and a vignette: We have conducted a representative survey of some 890 German psychotherapists (Hofmann and Walach 2011). We asked them about their attitudes towards spirituality and religiosity. In addition, we asked them about their spiritual experiences. Interestingly, only about a third call themselves atheistic or agnostic (15%) or are undecided (17%). The rest say they are spiritual (36%), or religious (21%), or spiritual and religious (2%). We asked the psychotherapists: 'Have you had an own spiritual or religious experience?' A third said 'never' (35%), the rest confirmed that they have had such an experience at least once or twice (26%) or more often (37%). In other words: the 'normal' thing, if we use the word normal meaning 'true for the majority', is to have experienced at least once something that we call a religious or spiritual experience. This tallies with UK data where half of the respondents claimed to have had a strong spiritual experience at least once in their lives (King et al. 2006). So why is this 'normality' not reflected in any sense in academic teaching, research and postgraduate practical training? The very same psychotherapists complained in our survey that this topic is not covered in continuing education credit courses, or in postgraduate clinical training, let alone in university training.

The following vignette might serve as a further illustration of my case: I was recently called to mediate a case where a German psychotherapist has received an official rejection letter for his postgraduate training for psychotherapists by the psychotherapy board on the grounds that 'spirituality as a component of psychotherapy training' was unscientific and could not be aligned with good professional conduct.

This is, I would claim, how taboos work: They operate on the basis of accepting, without further discourse or reflection, absolute presuppositions according to which certain topics or procedures, in this case spiritual techniques in psychotherapy, are 'unscientific'. Now, such a stance clearly must have a reason. What does the usage of the term 'unscientific' imply and presuppose? A few strokes of historical awareness might help. However, space dictates that I must be very brief and simplistic here.

#### **History**

The history of science is a history of enlightening humans and freeing them from the immediate grips of Nature. And to some extent we have been very successful. We do not fear the wrath of gods. Hunger has been eliminated at least in most Western societies. We need not die of cold or starvation any longer. We have done away with a lot of overly-silly rules of morality. In short, science, understood as the joint and collective effort of humanity to make sense of the world and prevent errors, has helped enormously with enlightening us and making political and philosophical enlightenment movements generically and culturally successful. If, in the West today, we live within enlightened and liberal societies it is largely due to the joint efforts of science and the humanities in explaining the world and of political activities putting knowledge into working practice.

Thus, in shorthand notation, we can say that science – and I take this term here to include the humanities – is a driver for and a guarantor of enlightenment and liberation (Walach and Reich 2005). A large part of this has to do with simply understanding how the natural, social and psychological world functions.

After the heliocentric model had been adapted – the trial of Galilei was exactly 400 years ago, having happened in 1616 – the competency of the church in all matters of natural philosophy was badly damaged. After the Newtonian synthesis in the late 18th century, roughly 150 years after Galilei, a God was only necessary in a deistic fashion as the first mover or maker of the grand clockwork of the universe, which henceforth would run without any divine interference (Sheldrake 2013). After the advent of modern theories of evolution and physics it has become conceivable that the ancient notion of a creator might be simply a myth that is not needed in any scientifically specific sense (Dawkins 2006).

So the result of the scientific process of discovery and self-evolution of the human collective mind is an abandonment of religious narratives in the traditional sense. This domain is completely occupied by science and its meta-narratives of evolutionary theory and standard theory of particle physics that explains matter.

As a result of this process of enlightenment and explanation of the natural world by the sciences, religion has become a nuisance, or superfluous at best. And with it its experiential core, spirituality, seems like a leftover from an epoch long past.

#### Spirituality and religion

My assumption is that spirituality is at the core of each and every religion. By *spirituality* I mean 'implicit or explicit relatedness towards a reality beyond the needs of the individual ego, in cognition, emotion, motivation and action'. I take spirituality to be nourished by experiences of such relatedness towards a reality transcending the needs of the individual

ego. Such experiences lie at the core of the religious sentiment. They are primary, and religions develop out of such experiences, through complex processes of communication, ritualizing narratives of experiences and hence re-enacting them, and moral codices that develop out of it (Derrida 2005; Fontana 2003; Scarborough 2000).

In Judaism, we can trace the formal religion back to the self-revelation of 'I Who Am Going to Be What I Am Going to Be' to Moses and all that followed from there. The form of this narrative is one of reported experience and its interpretation. For Christianity, we can trace its claims to the self-experience of the historical rabbi Jeshua as 'Son of God' as reported in the narratives of Jesus's baptism, to the experience of Paul who was converted from suppressor to believer and proselytizer. Islam can only be understood through the experiences of the prophet Mohammed. And for Buddhism the experiential core is self-evident in the enlightenment experience of Gautama Buddha.

Spiritual experience of such a transcendental relatedness of humans is generic. It is human. It is still very common and always has been (Forman 1998). There are, empirically speaking, deep inner experiences of reality that are experienced as transcendent or beyond the ego. Such experiences have been reported throughout human history, across cultures and times, and it is very likely that they are part and parcel of the human psychological make-up. And the fact that this is so is a taboo for our scholarly and intellectual discourse.

This is so because the close connection of spirituality, understood as the experiential core of religion, made spirituality a casualty of the scientific and political enlightenment movement, when enlightenment pushed religion to the fringes of the intellectual discourse and deprived it of societal impact. Since, in earlier times, spiritual experiences within our culture were, by default and necessity, religious experiences, interpreted within the framework of religion, they have become intellectually outlawed, like religious narratives, because most people do not distinguish between the domains of interpretative and ritual narrative that is religion, and pre-interpretative, transcultural experience that is spirituality. Phenomenological analysis shows remarkable similarities of narratives of such experiences across cultures and historical periods (James 1985). This may suffice to bolster my claim: Spirituality is the experiential core of religion, probably most of the time, and in most places and cultures.

Because of this process, science has emerged, for many, as the sole creator of valid metanarratives about the world and the universe. This meta-narrative has the status of a new kind of religion. For it rests on a series of assumptions that are needed to make the metanarrative work. Among them is an implicit materialism which assumes that the final and sole elements necessary to explain the world are of material nature, and that all conscious activity in the world can be derived from those material building blocks (Dawkins 2006; Dennett 1991; Sheldrake 2013). It is important to note that this is not an empirical, but a theoretical statement, or rather a hope.

And because the background narrative of science is materialistic by nature, anything non-material can only be the secondary result of the brain: as perception or imagination. Since an inner experience produced by such a system does not have an external referent in the sense of a perception, it must be an imagination, or a hallucination of a material system, the brain, idling. Put differently: The claim of a spiritual experience that is an inner experience without a reference to an outer reality through our senses must seem preposterous to a scientifically minded person of our days. For how should our consciousness access reality other than through senses? What should an inner experience of a spiritual nature be other than, within a materialist frame of mind, an imaginary mental merry-goround to make us happy and calm us down, but certainly without any claim to veridicality?

Thus, the final reason for the 'Taboo of Spirituality' lies in the scientist meta-narrative of today: Science itself, with a crypto-materialist mode has taken on the role of a new religion. Its own spirituality is the *experimental* mode of experience. And spirituality as defined above and as a core element of religion has been dismissed. There is no *epistemological* role for spirituality. And there is no function for spirituality in the new, scientist meta-narrative, except for individual meaning making, personal happiness and societal soothing.

#### The spirituality within science

If we analyse the various modes and processes science uses to arrive at knowledge, we can, as Aristotle has already done in his Organon, distinguish three modes of operations or conclusions (Aristoteles 1990; Oeser 1979a, 1979b). By way of induction we arrive at many empirical instances. From them we generalize and develop theoretical models. And those models and theories serve us to deduce new consequences, which we then again test empirically in new empirical induction processes. This process is well known, except I have brushed over one important step, as is normally the case in textbooks of science. This is the step where we sort the empirical data collected by inductive science into a meaningful pattern and create a theoretical model. This creative process is in fact the most important of all. Without it, we only have a heap of meaningless data. Normally, we have powerful theories that help us sort the data that we collect. But where do they come from? They are not packaged in the data. They are 'invented' in the best sense of the word: a creative scientist 'finds' the theory in an inventive, creative process. Phenomenologically speaking, s/he 'sees' the theoretical structure with her/his inner eye, either as a mathematical structure, or as an abstract set of relations. Well-known stories and anecdotes have provided us with phenomenological data about that process. Einstein described the process of finding the formalism of general and special relativity as a highly intuitive and creative act (Brian 1996). Heisenberg spent hours wandering along the beach of the island of Sylt, discussing and pondering (Heisenberg 1977). Plato described the process of finding the truth of a matter as a sudden enlightening process that comes like a flash of lightening (Plato 1967). Kepler used his imagination to find his laws as ideal movements of planets (Pauli 1952; Robert 1995). Charles S. Peirce defined this process as 'abduction' and described it as 'facts in search of a theory' (Fann 1970; Peirce 1931, VII: 218). In abduction the scientist makes a creative leap and 'sees' the story behind the data.

This process is very much akin to a spiritual insight or experience. It tells us something about the potential inner structure of reality in that it produces an abstract, theoretical pattern, often in a formal language or as an image. And subsequent empirical research, in the form of deducing empirical consequences from the model and then empirically testing them in an inductive step, tries to validate or disconfirm the model, or elaborates on its scope, until someone comes up with a better model that, more often than not, incorporates the old one as a special case.

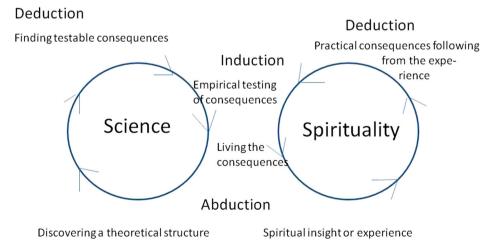
Thus, at the base of the scientific epistemological process is an insight, an inner type of experience or intuition about the structure of the reality as such. This is, I claim, a phenomenological sister of what I have termed 'spiritual experience'. The theoretical

insight of abduction starts from empirical data about the world as perceived through our senses, and ends with an abstract theoretical model, from where, in a circular motion, we turn back. The spiritual insight of spiritual experience, in contrast, starts as an inner experience of the totality, without any reference to the senses, and provides us with a deep insight about the structure of reality in very general terms. This can be the inner structure of our lives. Then we call it experience of purpose or meaning. It can be about the inner structure of the world, and then it very often comes with understanding, or with the experience, of values. In a sense, this spiritual experience is similar to the abductive process of science: it yields an abstract insight or model. But it needs to be put into practice. This is like the deductive step of science. Spiritual experience teaches us about reality as such. But we need to derive practical steps and consequences for our individual lives. This is like deducing consequences from theories in science. And the test of the pudding is in the eating: only if we can derive practical consequences from our spiritual experiences that make a difference to our and other people's lives will there be utility to the experience. In all spiritual traditions there is a pragmatic test of spiritual experience: practical steps in life. What counts is not what we say or believe, but what we do.

So, I claim, the epistemological process is quite similar, in science and in spirituality. The 'organs' are different: our senses here, our consciousness there. The referent is perhaps the same, but seen from two sides: material reality here, the deep structure of reality there. The outcome is similar as well: an insight into an abstract scientific theory here, a deep experience of reality there. The way forward has a structural analogy as well: deriving of empirical predictions and testing them here, practical consequences and living them there. I have collated the similarities in Figure 1 and in Table 1.

## The science within and of spirituality

If what I have said so far makes sense, then spirituality is also a process that is geared towards generating insights about the world. The difference from science is that its





Science	Spirituality			
Abduction: insight into abstract structure	Spiritual experience: insight into the structure of reality			
Sense experience and artificial aids of sense experience	Consciousness and inner experience through it			
Outer material world, reality	Inner conscious world, reality as a whole			
Derivation of empirical predictions and testing them	Derivation of practical consequences and living them			
Theoretical model	Religious system			
	Sense experience and artificial aids of sense experience Outer material world, reality Derivation of empirical predictions and testing them			

Table 1.	Similarities	of the	process of	insight in	science	and spiritual	itv.

mode of operation is *via* consciousness as such through inner experience. In contrast to science 'proper', there is no developed methodology, at least not in the West. While Buddhist and Indian philosophies have developed a rich methodology of such inner epistemology there is nothing equivalent in the West (Sedlmeier and Kunchapudi 2016; Wallace and Shapiro 2006).

While our empirical scientific method has had a history of 750 years to hone its methodology and arrive at methods to control error and bias in perception so as to generate valid knowledge, there is no comparable traceable continuity for the epistemology of spirituality (Walach 2014). There have been some initial attempts, like the anthroposophy movement initiated by Rudolf Steiner, and some methodological steps have been made recently (Bitbol and Petitmengin 2013; Petitmengin and Bitbol 2009; Sparby 2015; Weger and Wagemann 2015). But we have no comparable tradition of an epistemology of inner experience in the West as we have for scientific sense experience. It remains a task for the future.

But that does not mean there is no systematic core to the epistemological process of inner experience. All spiritual traditions know of some testing procedures for the authenticity and veridicality of claims stemming from inner experience. If that did not exist, anyone could claim anything.

However, sometimes an unfamiliar view is easier to deconstruct than one's own tradition. So let me, as an example, use the Zen Buddhist tradition. This, mainly in its Rinzai tradition going back to Hakuin, emphasizes direct experience of ultimate reality in what is known as Kensho or enlightenment experience. Once a student has reached this direct experience of ultimate reality the teacher will challenge him or her to 'demonstrate' it. This demonstration cannot be a narrative of the kind 'I have experienced such and such, and it feels like this ... '. The demonstration is by incorporating and enacting the experience (Miura and Fuller Sasaki 1966). The interesting point is: there is no right way in the sense that only one type of answer is correct. But it has to be authentic, and it has to be an enactment. And a teacher, who has had the experience himself or herself will know if someone is authentic or just acts out. So there is a test of the experience, and it is in action (Hakuin 1994). This is a parallel to the empirical testing of a theoretical model in science. Only in Zen the testing is in the action.

The Christian tradition knows something similar, even though less formal, in the tradition of the 'discernment of spirits' (Ammann 1986; Weismayer 1988), which draws on the Jesuanic saying 'by their fruits you will know them' (and not by their words, or their beliefs). In the discernment tradition the spiritual teacher would ask about the consequences of an experience: Does it actually liberate a person? Does it make him or her more ready to serve the community and other people? Does it instill happiness, serenity and peace? Or unease, fear and disrespect for oneself and others? Does it encourage growth and development, or rather restriction and devolution? (Interestingly, a postmodern spirituality such as the one by Ferrer (2002) uses very similar criteria.) Thus, it is always practical criteria and consequences that count as proof of an experience.

But those practical criteria are far from consensual and culturally validated. They are in no sense commonly accepted, as scientific criteria of validation are. They exist in pockets of traditions and for small groups of followers of certain traditions. But they provide a blueprint for a future science of spirituality, which we currently do not have.

Some elements would be the following:

- 1. The narratives of experiences would have to be communicable and thus experiences would have to be transferred from a first-person-singular account into a first-person-plural account: Experiences will have to be shared and as such express a common core. This common core should be seen, tested and contrasted with already extant core experiences, as are known from tradition (Walach and Runehov 2010).
- 2. Experiences that are experienced through the lens of consciousness can only be useful if this consciousness is trained to contain them. One problem of the early attempts at building psychology on inner experiences, as Franz Brentano had attempted in Vienna from 1873 onwards, was that his participants were not well trained enough. So this avenue of research was eventually given up as fruitless (Lyons 1986). This was not due to the principal impossibility. But it was a consequence of the fact that, as in science 'proper', one needs sharp and precise instruments to make valid discoveries, and each time a new instrument or methodology has been developed, our knowledge grows. Sharpening consciousness - training the capacity to focus, to differentiate, to observe precisely, to regulate and contain emotions, to keep up motivation, etc. - will be necessary for a science of consciousness or a science of spirituality to develop. This can be subsumed under the title of a 'culture' or 'cultivation of consciousness'. The ancient Pali name for this is 'dhyana', and its traditional translation is 'meditation'. Meditation is a comparatively narrow term, for the intention is to see consciousness as an instrument of experience. It needs to be honed, cultivated and trained. Some promising blends are already being published under the term 'contemplative neuroscience', where trained meditators qualify the findings of neuroscientific measurements (Jo et al. 2015, 2016; Lutz et al. 2015).

We can glean from that short description that we are far away from being able to develop spirituality as a science of inner epistemology.

#### **Preconditions and caveats**

#### Complementarity of mind and body

For my model to work there is one extremely important precondition which we have to make. We need to be willing to entertain the viewpoint that consciousness might indeed have its own, direct access route to reality and is not just the idling mode of the brain when it is not provided by input from the senses. The minimum requirement –

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without falling back into an obsolete substance dualism as it was introduced by Descartes – is what I call a complementarist stance: We can see consciousness and matter as two equally real, equally important and irreducible aspects of one and the same reality (Walach and Römer 2000, 2011). Sometimes this is also called dual-aspect monism (Velmans 2009). Only then will it make sense to say that consciousness has its own, complementary access route to reality from within.

#### **Rejecting materialism**

This entails rejecting any blunt materialism as a background narrative of science. Such a meta-narrative is not even necessary since science can also function by a critical reflective stance that deconstructs such totalitarian meta-narratives continuously (Latour 1999; Laudan 1996). What is necessary is the minimum requirement to define *science* methodologically as the joint effort of humankind to *reach an understanding of the world we live in that is as free from error as we can achieve*. This definition is operational and devoid of any meta-narrative metaphysical baggage and thus offers maximum openness. The final stuff of the universe may turn out to be matter, consciousness, reality or cosmic chewing gum. There is no foregone conclusion here. Only the agreement to use the best methodology in conjunction with public and open discourse to critique results and methods is a defining element of such an open science.

#### **Rejection of spiritual positivism**

In spiritual circles we frequently meet an opinion that parallels the epistemic process of science proper with that of spirituality in the sense that what is discovered in a spiritual experience is similar to what is seen through a telescope (Wilber 1998). There are many arguments why this is too simplistic. Although I point to the parallels, I think the epistemological conditions are completely different and we do not have a science of spirituality as yet, only a few hints. And certainly this kind of spiritual positivism that sees spiritual experience as picking up spiritual objects as our vision might be picking out visual objects – a viewpoint that has long been left behind anyway (Aerts 2014; Hoffman 2011) – should not be endorsed. Moreover, we have the cultural barrier of various languages, historical veils and political biases that need to be taken into account when analyzing accounts of spiritual experiences. In short: a simplistic parallelization of the scientific and the spiritual process of insight will not do (Ferrer 2000, 2002).

In the extreme, such a spiritual positivism might lead to what we nowadays encounter frequently: a blunt and brutal justification of inhuman acts by taking refuge with a completely unreflected spiritual positivism: 'God' – or Allah, or the Spaghetti Monster, you name it – 'told me to murder this person. So I did.' And because a spiritual entity allows or forbids certain acts we have no own responsibility asking about, reflecting upon and justifying our actions.

#### Secularity as a consequence of intellectual integrity

We should also not forget that a lot of followers of a scientific enlightenment movement, leading to a humanistic materialist kind of worldview or religion, have chosen this view because they are appalled at injustice, brutality, or the lack of political and human consideration of religious institutions. This is a very unfortunate legacy of formal religions that also discredits spirituality in the eyes of some thinkers. And this is exactly the reason why any type of spirituality that aspires to survive a conceptual deconstruction by science needs, by all means and by sheer necessity, to remain secular. This means: experiences are the remit of science, in very general terms. And about experiences themselves we cannot have a dispute. Whoever has had an experience has some kind of irrefutable knowledge, as Duns Scotus expressed it. But as soon as we start interpreting this experience and discuss the nature of its referent, we have entered the discourse of religion and theology. This may happen at some point, but it is a different discourse. That is why I feel we need to establish, first and foremost, that spirituality as a joint human enterprise is, and has to be, a subject matter of scientific, public inquiry. Let theologians and scholars of religion have a dispute about the interpretation afterwards. In other words: Taking spirituality seriously but leaving the association with formal religion out of the picture is a necessity and a consequence of intellectual integrity. If we do not take it seriously, we are not truly scientifically minded. If we only take it seriously if it is associated with our own preferred religion, we are not being scientifically open.

It is also important to note here: Some thinkers may come to the conclusion that, because of the different remits, the different historical trajectories and the inescapability of first-person, subjective phenomenology, spirituality and science cannot, even should not be confounded (King 2014, 2016; King and Leavey 2010). Whether this is so, I would not want to decide. But I would claim that, before we can make this decision, we need a public, scientific discourse. And this will only be possible if we lift the taboo.

#### Conclusion

I have argued that spirituality is part of the human condition and thus a worthy topic for scientific inquiry. We should address the taboo that is currently keeping public discourse at bay. Spiritual experiences are real and frequent. The question is what they mean and what their referent is. I have suggested here that spirituality is a mode of inner experience that uses consciousness, similar to science using senses, to gain an understanding of the structure of the world. While we have developed science over the last 650 years or so into a powerful instrument of discovery, with a clear method and structures for controlling error and bias, no such methodology is available for spirituality. We can only start developing such a methodology once the taboo is lifted. This is a result of the complex alliance of science with the movement of enlightenment that has not only marginalized institutional religion but has also relegated spirituality, as the experiential core of religion, to the fringes. A precondition for taking it into the centre of the scientific discourse is a dismissal of scientific materialism. This can be achieved if we consider consciousness co-primary with matter in a complementarist, dual aspect theory of consciousness, and if we understand that a training or cultivation of consciousness as an instrument of discovery is a precondition. This is what I take a secular kind of spirituality to be.

#### **Disclosure statement**

No potential conflict of interest was reported by the author.

#### Notes on contributor

*Harald Walach* has been a research director at the University Hospital of Freiburg, Germany (1999–2005), a research professor at the University of Northampton, UK (2005–2009), Director of the Institute of Transcultural Health Studies and leader of a postgraduate MA training course in Cultural Sciences and Complementary Medicine at the European University Viadrina, Frankfurt (Oder), Germany (2010–2016). He is currently a freelance scientist and writer with a visiting affiliation with the Medical University Poznan, Poland.

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