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# *Naturalizing Religion, Spiritualizing Science*

## *The Role of Consciousness Research*

**Abstract:** *This paper reviews and discusses empirical evidence from consciousness research, especially research into anomalies, and asks the question what, if taken seriously, would those data mean for our concepts of consciousness, science, and religion. It shows that the process of naturalization, i.e. finding scientific explanations for as yet badly understood phenomena, is not finished yet and could have a profound impact both on science and religion: traditional religious concepts would have to be reconsidered, and the scientific materialist worldview that is currently implicitly underpinning much of science would prove to be untenable. The empirical evidence, if accepted, demands a concept of consciousness that grants consciousness some fundamental status in the world, and the capacity to non-locally connect to events and other consciousnesses. This would seem to preclude a materialist concept of science, as well as some fundamentalist concepts of religion. It would continue the process of naturalizing religion into some as yet uncharted territory.*

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## 1. Introduction

In this paper I wish to explore how empirical findings from various disciplines of consciousness research, especially from branches of anomalous cognition research, point us to a new, probably spiritual view of our world. This will have some reverberations on traditional forms and interpretations of religion. But this will also have clear consequences for restricted vistas on what science is and should be, especially for scientific modes of conceptualizing science (Williams and Robinson, 2016). I will sketch what I see arising for both major domains of human meaning-making: religion and science. The way we conceptualize consciousness, including and emphasizing empirical findings, will have a prime role here. The reason for this is a simple historical and theoretical one: in most instances where science made important progress during its history, taking robust anomalies seriously was the decisive factor for progress (Laudan, 1977; Lakatos, 1978; Truzzi, 1987).<sup>4</sup> Here are two prominent examples: when Max Planck took the empirical finding of the discontinuous spectrum of black-body radiation seriously, quantum theory was born (Gernand and Reedy, 1986); this discontinuity went against all principles acknowledged at that time — ‘*natura non facit saltum*’ — nature does not progress in jumps’ — and was an ‘anomaly’. Equally, Kepler found his laws because he paid close attention to the anomaly of the Mercury perihelia and the deviations he saw in Tycho Brahe’s data on the trajectory of Mars (Maxwell, 1998; Fischer, 2015); the data observed by Brahe deviated from the supposedly ideal circular structures, and hence were anomalies.

The most exciting, most counter-intuitive and progressive steps in science have usually been made when something that counted as an anomaly in a current model was taken seriously and it was shown how it could be integrated into a wider, rational, and lawful view of the universe. This process is called naturalization: the explanation of hitherto unexplainable phenomena through scientific theories (Dupré, 2004; Principe, 2011). We will explore this process of naturalization

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<sup>4</sup> Of course, there is a plethora of ephemeral and controversial anomalies, from N-rays, that proved to be a perceptual mistake, to artefacts in astronomy and elsewhere. Normally, such would-be anomalies are cleared through a joint effort of scientists within a short time frame. Robust anomalies are anomalies that are researched by a sizeable body of serious researchers over decades, in the case of psi research since the foundation of the Society of Psychical Research in 1882, and that refuse to go away, yet defy an explanation in currently accepted terms.

in two ways. Science, especially consciousness studies, has naturalized many phenomena that were once thought supernatural. Most importantly, the study of anomalous cognition and other anomalistic phenomena contributed and still contributes to this process. We will review the most important ones. Taking the stance of ‘what if’, we will spell out the consequences for religion. This means that we are taking the stance of tentatively accepting things that are currently widely contested as true, and spell out where this would lead us.

But this stance will also have consequences for science. If, and only if, those phenomena are veridically proven to be factual, they will have clear consequences for how we can and should conceptualize science. It will mean that certain belief systems about the nature and scope of science are then incompatible. In particular, the widely accepted belief, taken as veridically proven, that science has to be predicated on a materialist ontology will turn out not to be feasible. In brief: a scientific viewpoint is incompatible with the empirical evidence if this is accepted. But perhaps the fierce resistance against even dealing with, let alone accepting, such phenomena might be due to the fact that many scientists are loath to give up their materialist creeds (Plantinga, 2011; Principe, 2016; Walach, 2019)?

Additionally, accepting those anomalous phenomena as veridical and taking this ‘what if’ stance to the end will also have important reverberations for consciousness studies. It will delimit the perimeter of models of consciousness that are actually compatible with this type of evidence. In this sense, this investigation is circular: it starts with the empirical evidence coming from consciousness studies and anomalous cognition research. It establishes whether and under which conditions the evidence can be accepted. Using a ‘what if’ stance, it then asks what consequences this evidence has, not just for religious concepts, but also for our view of science. This will yield a boundary for models of consciousness that fall within the perimeter of potentially true and those that fall outside.

We start by elucidating the concept of naturalization and the role of anomalies in this process. We then review the empirical evidence of anomalous cognition research and ask what consequences the results have for views about science and for religious concepts, finally coming back to consciousness studies again and summarizing the message for this field. We start with naturalization.

## 2. Naturalization

By naturalization I mean explaining a supposedly supernatural or not understandable phenomenon by using a scientific model through known processes (Huxley, 1892; Burt, 1932; Lightman, 1987; Dupré, 2004). A typical example of naturalization would be coming to understand that the volcanic eruption of ashes into the sky is not the god Hephaistos thrashing his anvil, but pressure generated by rising temperatures and rising magma inside a particularly thin part of the Earth's crust. The scope of naturalization has always been multi-pronged. In one direction, it led to the understanding of the working of nature as such. Thus, we know today that the cause of tuberculosis is an infection with a bacillus of the same name, discovered by Koch in the 1860s (Uexküll and Wesiack, 1988). We might actually analyse this cause in more depth by saying that the 'true' cause is not the infectious agent as such but the interaction between an infectious agent and host, and only in a weak host does an infectious agent become a cause, while for a strong host it is irrelevant and sometimes even beneficial (Cohen, Tyrrell and Smith, 1993; Yan *et al.*, 2018). This shows that the business of naturalization is potentially endless.

We understand 'science' to mean a collective process of methodologically reflective enquiry that aims to understand the world and tries to avoid mistakes as much as possible by means of methodological safeguards, collective reasoning, and critical discourse. Observe that this is an operational definition of science that avoids any regress to purported fundamental truths. Thus, both science and the naturalization that comes with it are historically contingent. While science does seem to arrive at a true picture of the world by accumulating knowledge, there are also upheavals that make earlier findings obsolete or untrue, irrespective of their empirical success (Rescher, 1983; Oeser, 1987; Laudan, 1996). For instance, Ptolemy's heliocentric astronomical model was actually empirically more correct than the geocentric model of Aristarchos of Samos, later revived by Copernicus. Nevertheless, it is scientifically false (Koestler, 1964; Fischer, 2015). Newtonian physics turned out to be a special case of quantum theory that works for the meso range of objects. If objects become too small, its calculations are false and quantum theory has to be applied. It is also false if objects become too large, and relativity theory has to be applied (Maxwell, 2017). Thus, theories can be true in one respect, but false in another. False theories can make correct predictions and provide seemingly adequate explanations, as the Ptolemaic model has

done. And true theories can be completely against the everyday consensus of appearances, as with Galileo's law. Falling bodies on Earth actually travel with different speeds. Galileo's law is a true abstraction that is valid for a vacuum only, which does not exist on Earth (*ibid.*).

Thus, naturalization as a programme is always contingent on the current truth-value of scientific theories and therefore rarely absolute. Nevertheless, it is a valid and natural consequence of our scientific enterprise and access to the world. This naturalization is multi-pronged. One scope is to understand natural events, thereby reducing supernatural explanations along the way. Another scope was and is to explicitly understand supernatural phenomena as instances of some natural law that we have not yet fully grasped. In that sense, naturalization is also a programme. It is a programme, and a hope, of understanding every instance of any occurrence and event in the universe in terms of natural laws. In that sense naturalization is a quasi-religious enterprise, as it operates with a secularized concept of hope or expectation that, by definition, is always in the future. For instance, science 'expects' that evolutionary thinking will clarify fully how the Earth and all life on it came into being (Hands, 2015). It has not done so yet, as the hot debate over details shows. Thus, naturalization has taken over some roles from religion. It is not just the attempt of explaining supernatural events by natural laws and well-understood principles; it is also the prospect of being able to bring each and every phenomenon in the universe under its remit. The first is an empirical stance, the latter is a quasi-religious programme. There is nothing to be said against this, as long as it is reflectively clear. It is also important to realize that the fulfilment of this programme lies in the future and is dependent on the hope and expectation that science will — eventually — provide the necessary explanations. This is similar to the classical theological definition of hope: 'Hope is the sure expectation of future glory', in the words of Petrus Lombardus, in his *Sentences*, a classical medieval textbook of theology (Petrus Lombardus, 1879, vol. 3, 811:26).

### *2.1. Naturalization and religion*

This brings me to the scope of naturalization for religion and a very brief summary, as many people think religion and naturalization is a contradiction in terms. It is not. The history of theology teaches that. The most fruitful era of past intellectual life in the West, the scholastic

period between 1200 and 1360, until the Black Death had swept Europe and killed a lot of the development, was a period of naturalization (Flasch, 1986). This was based on the very first wave of naturalization in the West: the texts of the Greek philosophers of classic times (Feyerabend, 2011). They were the first to employ systematic observation and thinking for the purpose of understanding the world. Arabic translations, interpretations and glossae, and philosophical commentaries reached the Christian West through schools of translators in Sicily and Spain. Original Greek texts, if they were not already available and known (Gouguenheim, 2008), came via Constantinople and, with them, some scholars with the ability to translate them (Stürner, 1992; 2000). So at the time when Thomas Aquinas was writing, around 1250 to 1260, he had both the Arabic translations and commentaries on Aristotle and the philosophical reflections on it — in Latin translations — and new translations by William of Moerbeke of the original texts of Aristotle and some Neoplatonic and Platonic writings, such as the *Liber de Causis* and the body of the texts of Pseudo-Denys (Weisheipl 1974). This was the most important starting point for the second naturalization. Thomas Aquinas and other writers before and after him — like Robert Grosseteste, Adelard of Bath, Albert the Great, Roger Bacon, Henry of Ghent, Duns Scotus — made it their task to understand the tradition of the scriptures and of the so-called fathers, the writers of Hellenistic and Roman late antiquity that had already tried to marry philosophical thinking with Christian teaching (Crombie, 1953). This understanding was, however, informed by the influx of Aristotelian, Platonic, and Neoplatonist thinking, which needed to be combined with the traditional teaching. The outcome of this scholastic enterprise was a grand unification of what was then ‘science’ — namely Aristotle’s natural observations, astronomy, and an encyclopaedic knowledge of nature and Earth from antiquity — with Christian teaching. The genius of Thomas Aquinas lay in showing that unification was largely possible without too many difficulties. There were some discrepancies, of course: Aristotle held that the universe was without a beginning, the Bible taught otherwise. In such cases, the Bible trumped Aristotle. But in most cases Thomas Aquinas was able to show a middle way. Naturalization had reached a consensus in which, at least for the Christian West, there was no contradiction between ‘science’ and ‘theology’ or faith.

This seemingly peaceful coexistence was broken by William Ockham and others (McCord Adams, 1987a,b; Leppin, 2003). They attacked the Thomasian synthesis using their critique. This threw

universities into the fight about universals as a shorthand for the Greek — mainly Aristotelian and Platonic — belief in ideal entities. Such entities were necessary, for instance, to uphold the Aristotelian view of perception. According to this model, our senses abstracted a sensible specimen from the seen object, which was then manipulated by the mind, which then abstracted some mental specimen with which it operated (Oeser, 1969). Ockham and others attacked these ‘superfluous’ entities. *Pluralitas non est ponenda praeter necessitatem* — a multiplicity (of entities) should not be postulated without necessity — was Ockham’s axiom, and was handed down as ‘Ockham’s razor’ (Ockham, 1982, p. 59). The goal was to re-establish a direct and immediate contact between God and soul, the mainstay of Franciscan spirituality within which Ockham was raised (Day, 1947). The irony of this history is that this logical attack by Ockham and his followers on Aquinas’s and others’ Grand Synthesis was successful, and thus paved the way for a science of the individual. For, if there are no universals in the first place, then individuals themselves have to be studied, and this can only be done empirically. In that sense, Ockham’s criticism paved the way for empirical science conceptually, although he did that in the service and for the benefit of private religion.

The next phase of naturalization started with the empirical and theoretical scientists that are normally seen as scions of the scientific revolution, which probably was not a revolution in the historical-scientific sense as it just continued earlier attempts (Easlea, 1980; Principe, 2011; Maxwell, 2017). It was only later, in the seventeenth and eighteenth century, that this drive for naturalization was also married sometimes to a materialist worldview, as in Hobbes, and later in D’Holbach, D’Alembert, and Diderot, and sometimes to anti-clerical but deeply spiritual mindsets, as in Huxley (Dupré, 2004). So the simple equation ‘naturalization = science = materialism’ is surely wrong (Plantinga, 2011). At best it is an illicit oversimplification, at worst it is damaging, because it concretizes wrong concepts. Naturalization as an empirical stance has always been compatible with any religion as it does not posit any requirements of faith and philosophical commitment.

Religion has not always made it easy for scientists, from a fear of loss of power and influence to serious problems in self-conceptualizations. Hence it has indirectly played into the hands of adherents of a strong type of naturalization with the goal of abolishing all religion. Had it supported naturalization as an important religious

enterprise, as through most of its history in the middle ages, a lot of the friction that led to the struggles for liberation characteristic of the Enlightenment period until recently could have been avoided. Religion, in as much as it is a narrative of mythologically veiled truth about the human condition, cannot but welcome true and solid insights about this condition from science.<sup>5</sup> In that sense it is high time to revive the contact between science's drive for naturalization and religion in order to benefit both mankind and religion.

At this point we will turn to empirical findings that come from research about consciousness and anomalous cognition. Before we do this, two caveats are in order.

## 2.2. *The notion of 'scientific fact'*

Scientific facts are not constituted by empirical findings alone (Fleck, 1979; Maxwell, 1998; 2017). They cannot be, because every empirical finding is 'theory laden', as Hanson (1969/2018) put it. This means it is contingent on many presuppositions: the methods, the type of phenomenon that can be found by a certain method, etc. Scientific facts are constituted by empirical findings that can be explained within an accepted theoretical framework. In that sense empirical findings *together with* an accepted theory have the potential to be accepted as a fact, if accepted by a majority of working scientists (Latour, 1999). Therefore, phenomena as we are going to discuss now can never be considered scientific facts. They can be considered anomalistic findings that have a more or less robust empirical core. But, by definition, they are called 'anomalistic' because we have no accepted majority view on how to understand them theoretically. Sometimes

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<sup>5</sup> That religious narratives must not — at least as a rule — be taken literally is an insight that biblical scholarship had discovered already in the middle ages. Abelard pointed out in his seminal 'Sic et non' in the eleventh century how the Bible was not logical and hence could not be taken literally. Bonaventure, in the thirteenth century, summarized the various ways of understanding the Bible, which paved the way for the hermeneutic tradition that at the latest, with Schleiermacher in the eighteenth century, came to the consensus that biblical texts have to be understood and interpreted according to the category they belonged to. Only insular fundamentalist groups have ignored this history. The irony is that scientific enemies of religion mould their critique largely onto those travesties of scholarly theology and historically informed religion. A prototypical example is the discussion about evolution and creationism. Creationism, for instance, has been long abandoned by the major Christian confessions which are open to evolution as a scientific idea with the appropriate caveats regarding the unknowns in current evolutionary thinking.



people say ‘they contradict natural laws’ or ‘they contradict all we know’. Such language is shorthand for saying: ‘The current knowledge we have does not allow us to understand these phenomena and integrate them into our picture of the world. Therefore they are anomalies.’ This is true. What is not true, and is in fact an unscientific stance, is the often-added injunction: ‘therefore they must be wrong and we must discard them and not deal with them any further.’ This actually goes against the grain of good science. Anomalistic phenomena only contradict ‘science’ if the term is taken to mean ‘our view of the world as currently understood’. Well, maybe our understanding is deficient and incomplete? And would taking such phenomena seriously help our understanding?

### *2.3. Regularities and causal interactions*

A second caveat: most regularities that we are used to in our current understanding of the world are causal interactions. This means they work via exchange particles, like photons. Even though photons are massless, they still count as ‘matter’ in that they have to obey the rules of our current theories; for instance, the locality condition of special relativity that postulates a finite speed for them. Or the limitation of causal exchange particles in the standard model, which only knows four of them and finding others would require overthrowing the standard model. The phenomena we are going to discuss are exceedingly fickle and apparently not causally stable in the same sense as shooting a well-aimed rifle at a target is causally stable. But who says that only causally stable processes can be part of the universe? Perhaps the process of naturalization will show that there are other, namely causally fickle but nevertheless regular, processes in the universe? Eddington used to compare science to a net with a certain mesh diameter. It can only catch fish that are larger. It would be wrong to conclude that there are no smaller fish in the ocean (Batten, 1995). Perhaps the nature of the phenomena we are going to discuss requires different methods and can only be shown to be real using our current methods to a degree that might not be as convincing as, say, the proof that the Higgs boson exists, even though the Higgs boson is also very fickle. In contrast to the phenomena of anomalous cognition, there is a well-founded theory that predicts it, including its fickleness (Curriuan, 2017).

This is the reason why I think we have to proceed with the theoretical stance of ‘what if’: ‘What if these phenomena are really

true?’ The meaning of this phrase is: ‘What if those phenomena do not just pop up as empirical anomalies, as they currently do, but will eventually be integrated into a model so that it is rational to take them seriously?’ Only then will they reveal their potential, both of impacting our worldview and broadening our scope of naturalization, and of complementing our methodology. So, let us proceed with this stance of ‘what if’.

#### *2.4. Findings from anomalous cognition research*

Research in anomalous cognition has various aspects (Edge *et al.*, 1986; Jahn and Dunne, 1987; Schmeidler, 1998; Schmidt, 2014; Radin, 2018). There is research in clairvoyance — gaining knowledge about distant targets, either human or material, where no classical means of gaining this knowledge exists (Braude, 1978; 1987). Remote viewing describes a paradigm whereby a ‘remote viewer’ is instructed to describe the physical environment another known person is in without having any clue about it, or describing a distant object without previous knowledge of it (May and Marwaha, 2018). Telepathy is a special case, where the target is another person’s mental content that is not accessible via classical means, either because the person is distant or because no classical connection can be made due to shielding. Such studies have been conducted during dream states: one person sleeping and reporting dreams after waking up, and a distant person watching targets such as videos (Sherwood and Roe, 2003). In ganzfeld telepathy studies the dream state is replaced by a relaxed state in the ganzfeld: white, or more recently pink, noise via ear phones and goggles irradiated with red light (Alvarado, 1998; Storm, Tressoldi and Di Risio, 2010; Tressoldi, 2011).

There is research in precognition — knowing things before they happen (Mossbridge, Tressoldi and Utts, 2012; Mossbridge *et al.*, 2014; Duggan and Tressoldi, 2018). This comes in various strands. Presentiment effects are measured on an unconscious, physiological plane, tapping into psychophysiology. In that case, the impact of a future-threatening visual stimulus, for instance, or a rewarding one, can sometimes be identified before it actually happens by a measure of autonomic arousal, such as electrodermal activity. Psychokinesis studies document the influence of a human observer or human intention on a physical system. There are various experimental paradigms. An often-replicated one is the influence of an observer on a random event generator (Jahn and Dunne, 1987; Bösch, Steinkamp

and Boller, 2006; Tressoldi, 2011; Walach *et al.*, 2020). Another is subsumed under the umbrella term ‘healing research’, where various systems, animals, plants, in vitro systems, human beings are ‘influenced’, positively mainly, by human intention (Roe, Sonnex and Roxburgh, 2015).

Reviews and meta-analyses of the literature document positive effects, even though not each and every paradigm or experiment turns out to be replicable or replicated (Walach, Tressoldi and Pederzoli, 2015; 2016). A recent review of the literature has collated meta-analyses of experimental research in these areas (Cardeña, 2018). Each meta-analysis contains all the available evidence of a certain area. Often these meta-analyses supplant earlier ones, including stricter criteria for selection and analysis. They do not cover all research areas, as only experimental, controlled, and blinded studies are selected. The result is given in Table 1.

Note that most meta-analyses are recent and all of them have significant effects. The effect sizes are small, but in some paradigms very robust, with a high level of significance. One should also be clear: there is no single foolproof paradigm. Most paradigms feature famous replication failures by independent researchers or even by the same researchers (Ritchie, Wiseman and French, 2012; Grote, 2015; 2017; Maier and Dechamps, 2018; Maier, Deschamps and Pflitsch, 2018). The parapsychological literature demonstrates displacement effects, where expected effects suddenly turn up in the ‘wrong’ group, but significantly so. They are full of decline effects (Maier and Dechamps, 2018; Maier, Deschamps and Pflitsch, 2018), where effects once discovered decline and then see a revival in the hands of new researchers or the same researchers. There are effects where sceptics tried to replicate paradigms but were unable to, while ‘believers’ could, as if the effect would only be visible in certain contexts and not in others (Wiseman and Schlitz, 1997), and in general those who believe in psi effects tend to have positive results, while those who don’t believe usually fail. This effect is robust and known as the ‘sheep-goat’ effect, with a significant meta-analysis confirming it (Storm and Tressoldi, 2017). Strict *direct* replications are extremely difficult, if not impossible, while conceptual replications are often possible (Radin *et al.*, 2011; 2012; Mossbridge *et al.*, 2014; Radin, 2018).

Author	Paradigm	Effect Size	Significance p =	Comment
Storm et al. 2017	Dream telepathy	d = 0.20	$5.19 * 10^{-8}$	50 studies, 50 years of research
Storm et al. 2010	Ganzfeld telepathy	d = 0.15	$1.15 * 10^{-10}$	30 new studies, replicating findings from 78 old studies
May et al. 2018	Remote viewing	Not extracted	$2 * 10^{-20}$	25,449 experiments within a military context
Bem et al. 2015	Precognitive or retroactive priming	g = 0.09	$1.2 * 10^{-10}$	6 sigma effect, 90 experiments, Bayes factor of $1.4 * 10^9$
Duggan & Tressoldi 2018	Presentiment effect	d = 0.28	$5.6 * 10^{-6}$	Replication of previous analysis with 27 new studies; Bayesian analysis yields robust results
Bösch et al. 2006	Micro PK experiments	$\pi = 0.50003$	$z = 2.46, p < 0.05$	380 experiments; final replication negative, hence small effect
Roe et al. 2015	Distant intentionality	r = .26; r = .22	p < 0.05	Effects are not very strong; 49 non-human and 57 human studies
Schmidt 2012	Distant helping	d = 0.11	0.029	11 studies
	Remote staring	d = 0.13	0.013	15 studies

*Table 1.* Summary of the most important meta-analyses of anomalous cognition research adapted from Cardeña (2018) and expanded.

This fickle nature of the effects has led critics and sceptical researchers to see them as artefacts, due to faking, publication bias, and selective reporting (Alcock, 2003; Wagenmakers *et al.*, 2011; Ritchie, Wiseman and French, 2012; Reber and Alcock, 2020). Considering that not only psychology but science as a whole is suffering from a severe replication crisis it is important to take these sentiments seriously (Horton, 2015; Open Science Collaboration, 2015; Baker, 2016). But we should consider two things. First, anomalistic research had installed safeguards against artefacts, such as strict blinding and making publishing negative effects a general policy, since the 1980s. Thus, publication or reporting biases are unlikely to account for the effects observed in the literature. Second, these effects show systematic features when declining and recovering. Thus they are systematic to an extent that we may not yet understand. We have provided some ideas, but it is not the place to discuss this here (Lucadou, Römer and Walach, 2007; Walach, Lucadou and Römer, 2014).

I contend: the sheer length of time over which those effects have been observed (Sommer, 2014; 2016), the multiplicity of experimental tests, the robust phenomenology in uncontrolled settings throughout cultures and ages (Thurston, 1952; Grosso, 2016), and the diversity of findings in different areas allow a twofold conclusion. First, *something* must be there. The picture we are seeing is incompatible with a sheer statistical fluctuation. Else all researchers and observers, in all countries, at all places, and in all cultures over about 60 years of formal experimental research activity and during many centuries of informal field research would have erred. This is not impossible, but highly unlikely. William James, in his presidential address to the Society for Psychical Research, borrowed an image that Gurney had introduced: the evidence is like a faggot. Each single stick can be broken, but the faggot as a whole cannot (James, 1896). The second conclusion we can draw from the evidence is that it is unlikely to be a *classical* causal effect we are seeing here, mediated by any of the known exchange particles of causal interactions, like photons, gluons, gravitons (Lucadou, Römer and Walach, 2007; Walach and Horan, 2014; Maier and Dechamps, 2018) or other yet unknown interaction forces. Else we would see a stabler picture, where a replicable paradigm would have emerged by now which would force even the wildest sceptic into grudging submission.

We will therefore likely need a theoretical model that accommodates this feature. It is not just the fact that we observe little direct

replicability that suggests a lack of causal stability. It is also the fact that local distance seems to be irrelevant, which speaks against a signal of the known kind being operative. And most importantly, precognition studies violate special relativity in principle.

Taking our ‘what if’ stance, where does that leave us? I suggest the following propositions:

1. Under certain circumstances, which are badly understood (I will drop that clause in future statements, but it applies to them all), human consciousness can access the content of another human being’s consciousness. Perhaps intentionality on the target person’s part, or a special state is important for that.
2. Under certain circumstances, human intention can make a difference to another subject’s physiology, to a technical system, or to another person’s mind.
3. Under certain circumstances, as in dreams, human physiology and human consciousness can perceive future events.
4. Under certain circumstances, human consciousness can extract information from systems it is not locally connected to.

### 2.5. *Findings from reincarnation research*

Research in cases of children that spontaneously report memories from previous lives or who show disfigurements that are consistent with memories of accidents or torture in previous lives has a long tradition, even though only a small group of researchers have collected some hundred well-documented cases (Stevenson, 1997a,b; Keil and Stevenson, 1999; Tucker, 2013; Haraldsson and Matlock, 2016). Not in all, but in many cases the memories or narrations of children, usually starting around age 2 to 4 and ending spontaneously around age 8 to 10, could be verified. Since all of this research is observational field research, it is the consistency and the breadth of coverage that conveys some flavour of convincingness. Such cases have been found in all cultures — more, of course, in Asia or in cultures such as the Druse culture of Lebanon, where belief in reincarnation is normal. But such cases have also been documented in Europe, the Americas, and other parts of the world. The most impressive ones are those where the narration of the child was documented before any research was conducted and where researchers could in fact unearth documents, coroner reports or newspaper clippings, archival material, or living testimonies of people at the places indicated that then matched up. Not in all cases were there

complete matches, and not all details matched, but altogether it is an impressive database. A particularly impressive case was documented by Haraldsson and concerns a boy who claimed to have been the previous wife of another person (Haraldsson and Matlock, 2016). This husband was still alive, and the boy could even indicate where in the basement the previous personality had hidden money that was subsequently found. Again, there might be fault-finding with single cases, but the variety and multitude of cases and researchers speak against the chance that the whole database is accidental or based on fraud.

Again, taking a ‘what if’ stance, we can add:

5. Sometimes and under certain circumstances, human consciousness seems to manifest across different episodes of life, be it that an individual consciousness is reincarnated, as the term would have it, or that there are other processes whereby an individual consciousness partakes in another person’s past memories and life.

### 2.6. *Findings from near-death research and terminal lucidity*

Near-death experiences (NDEs) have been documented since the 1980s in the scientific literature. Prospective research started with the large Dutch study by Pim van Lommel, where all hospitals in Holland documented resuscitations of cardiac arrest patients, all of whom were screened for such experiences (van Lommel *et al.*, 2001). Roughly 11% of all resuscitated persons who were previously in a state of near death, with missing heartbeat and circulation, sometimes up to 30 minutes or longer, reported such experiences. Often a visual experience of light, encounters with deceased persons, and/or with religiously meaningful figures or spiritual beings is reported, as well as emotional-cognitive experiences of love, meaning, or knowledge. Sometimes information is received. Recently, a special collection of 100 cases was published, all of them from the published literature, where, apart from the fact that a conscious NDE had to be documented, there were further requirements (Rivas, Dirven and Smit, 2016):

There were medical files that documented the approximate time the heart had stopped beating, a documentation of the duration of the whole sequence, a good documentation of medical interventions, and a non-local perception of conscious content, for instance reports about conversations at different places, observations of things that could not have been seen from the vantage point of a person on a stretcher or in

a vehicle, or information about distant events that were later verified. In other words, only exceptional cases with some lucid and verifiable cognitive content were selected and presented. Again, the faggot argument applies: some of this might be misperception, some of it erroneous, some even fake. But all of it?

Here are some examples: in one case a person saw a penny piece on top of a medical device that no one ever accessed. When this insight was checked, it was indeed there. In a famous example of van Lommel's collection one person whose dentures had been taken out for intubating remembered the person who had taken them, without ever having seen him during his stay in hospital, and could even tell him where he had put the dentures, as they were missing. However, it should also be noted that these phenomena seem to defy experimental control: in a prospective study where some information was deposited in a hidden place for the purported experiencer to see and to report, nobody saw or reported this information (Parnia *et al.*, 2014). Whether this failure was due to a lack of statistical power or a lack of causal availability of such information is unclear.

Another, somewhat similar, phenomenon is terminal lucidity (Nahm *et al.*, 2012). This term refers to situations where a patient has been severely compromised neurologically — for instance due to a long history of a degenerative disease like Alzheimer's dementia, severe stroke, brain tumours, etc. — and has been unresponsive or even comatose for a long time, not able to communicate or recognize persons in the vicinity, or respond to verbal cues. Suddenly this person becomes clear in mind and behaviour, can conduct intelligent and meaningful conversations, and starts conversing with the environment, especially with close relatives shortly before death. Approximately 50 well-documented cases have been reported, and an early study estimates that about 13% of all people experience such a kind of terminal lucidity.

Using the 'what if' stance we conclude:

6. Under certain circumstances, there is conscious cognition, even non-local cognition, including seeing, hearing, and mental perception, even though all medical signs speak against the activity of higher brain centres normally deemed necessary for complex cognition, memory, and perception.
7. Under such circumstances, perceptions of things or events at locally remote places seem to be possible.



8. Under certain conditions, a functioning brain does not seem to be a necessary condition for consciousness, although normally it would appear so.

### **3. Consequences for Our Concept of Consciousness**

These findings, taken together and taken under the precaution ‘what if’, speak a comparatively clear language. Consciousness seems to be not bound to brain activity (points 6, 7, 8 above) *exclusively*. This does not mean that we do not need a brain. But it may imply that the common sense equation ‘consciousness = brain activity’ is wrong. It may, as a minimal consensus, mean: consciousness is fundamental (Chalmers, 2007; 2010), and under normal conditions the brain is the organ transmitting it. It is currently not clear whether this needs to be an ontological or a phenomenological statement. A double-aspect theory, whereby consciousness and material activity are co-dependent on a common third, underlying, and as yet unknown reality, might be a minimum consensus model required to capture these phenomena (Walach and Römer, 2000; Atmanspacher, 2003; Walach, 2005; 2019; Atmanspacher and Primas, 2006; Velmans, 2009). What is excluded is any kind of reductionist-materialist explanation of consciousness, whether it is a simple identity-theoretical version, or a more sophisticated emergentist notion, or other types of supervenience theory. These models have already been severely questioned by philosophical argument (Chalmers, 1996; Hoche, 2008; Noë, 2009; Nagel, 2012), but empirical data militate against them as well.

Whether this speaks for a unified field of consciousness (Jahn and Dunne, 1986; 1987; 2001; Beauregard and O’Leary, 2007; van Lommel, 2011; Beauregard, 2014; Currivan, 2017), individualized sparks of consciousness that light up and move on, or another model, is a question that cannot be answered on these empirical grounds.

Our conscious being seems to be able to transcend the four-dimensional reality of our current physical theories under certain circumstances. That does not mean that the theories are wrong. It might mean, however, that we need another model of higher spatial dimension, a so-called hyperspatial model that would actually be able to explain such phenomena (Heim, 1984; 1989; Carr, 2015). Or it might mean a model in which information is basic (Görnitz, 2018) or in which consciousness or matter are co-primary, as in a Whiteheadian panpsychist model (Whitehead, 1929/1978). Or it might, as a

minimum consensus, mean that there is some inbuilt non-locality, similar to non-local entanglement correlations in quantum physics, but also in a macroscopic partitioning (Atmanspacher, Römer and Walach, 2002; Walach and von Stillfried, 2011). Whether or not this is of a physical or other nature is difficult to say. Such a model would be able to explain all of the above phenomena except the reincarnation type disfigurements. The latter would require an ontologically dualist model which could, in conjunction with a generalized entanglement model, also explain these phenomena.

If that is the case, then consciousness would surely have a broader reach than we normally think. It might be able to structure reality by intention and focus. This is the place where we start to query how this naturalization might impact religion.

#### 4. Consequences for Religion

##### *4.1. Naturalization of prayer and healing*

If our conscious intentional stance can have direct influence on material or psychological systems, as healing research suggests, this would mean that we do not need the idea of a God intervening on behalf of a praying person. It might be human intentionality that helps structure whatever material events happen. Already Augustine observed: miracles do not contradict nature, they only contradict what we know about nature (Augustinus, 1842; 2007, XXIX, Cap. 2; Nietzsche, 1865). In that sense, what looks like a miracle from one angle might be a natural event from another angle, given additional knowledge. Thus, human prayer, the wish for an event or a change in states of things that cannot be achieved by classical means of action, might be an instance of direct intentionality that, under certain as yet badly understood circumstances, may be able to non-locally influence reality. This would make understandable how some instances of seemingly miraculous events come about, such as spontaneous healings (Duffin, 2009), or happy coincidences. Already Jung and Pauli observed that under certain circumstances — Jung spoke of an activation of an archetype — mental or psychological states of a person and physical circumstances align themselves (Jung, 1952; Meier, 1992). Observed from the outside this looks as if a psychic state could arrange physical reality in a certain way, where in fact it is ‘only’ a serendipitous correlation (Mansfield, 1995). The Jung-Pauli model of synchronicity is a useful conceptualization here, as it calls for an

expanded physics but brings the seemingly unnatural and sometimes uncanny events within the scope of natural explanation.

#### *4.2. Naturalization of magic and a culture of consciousness*

Magic is often seen as a contradiction in terms, not only against rationality and causality, but also against religion proper (Thomas, 1981; Bukow, 1994). For many kinds of orthodox Christian religious beliefs magic is the domain of demons and the devil, whereas God and the saints operate on different planes. The findings from consciousness research discussed above would allow for a naturalization of magic. Magic, in that sense, is the harnessing of the intentional power of consciousness (Radin, 2018). This can be used, as has been observed, for better and worse (Dossey, 2002). A prayer can help, an evil wish can wound. This is the deeper reason, in my view, why the Christian ethics as purported by the historical Jesus is an ethics of intention: already the intention is the root of good and evil, not only the factual deed (Vermès, 2003). Behind this understanding lies the insight about the power of human intention. If it is not God, or at least not only God, who operates through prayers, but mainly human intention, then it becomes necessary to cultivate the power of consciousness. Then it would become necessary to hone and craft our intentions, to guard against bad intentions and to cultivate good intentions (Fredrickson, 2001; Wallace and Shapiro, 2006; Trautwein, Naranjo and Schmidt, 2016). It might even be useful to scrutinize certain magical practices and understand them as instances of ritually stabilizing and centring consciousness so as to be more intentionally efficacious.

#### *4.3. Naturalization of transitional states of consciousness, spirits and ghosts*

If, as research in near-death states, terminal lucidity, and reincarnation types of experiences suggests, consciousness can exist partially detached from an individual human being, then it is a small step to imagine that some kind of consciousness might exist in transitional states that are as yet badly understood. *The Tibetan Book of the Dead*, as one example of a religious text, describes such states and various religions have elaborate teachings about other worlds or states of consciousness outside incorporated beings (Casey, 2009; Lopez, 2011). The empirical results support some sort of conscious life beyond the one we are all used to. If the reincarnation types of experiences are

accepted, then the standard Christian teaching of a one-off life has to be revised. But it is doubtful that this is the only way of conceptualizing even a Christian point of view, as others have been held in history. Saint Paul, for instance, seems to have envisaged a spiritual kind of existence with a respective renewed body, a teaching that seems to have been close to the original Jesuanic ideas (Schwarz, 2003; Tabor, 2012). And Origenes was one of the early church fathers who tended towards a reincarnation type of teaching (Rosenberg, 1952; Schmidt-Leukel, 1996). At any rate, discarnate spirits or entities with consciousness but without visible physical existence certainly become an option on such a background. It would likely necessitate a physical conception with a multidimensional space.

Exactly what is going to happen after death is not clear at all, and suggestions of the type that heaven or life after death have been ‘proven’ seem premature. All we can say is that there is apparently some kind of existence of consciousness. Whether it is of an individual or general kind is difficult to say, although the phenomenology speaks more for an individual type.

#### *4.4. Naturalization of miracles, special powers, and feats*

The Yoga tradition is full of ‘siddhis’, special powers that come with spiritual awakening and development (Haraldsson, 2013; MacPhail, 2013; 2017; Sedlmeier and Kunchapudi, 2016; Vieten *et al.*, 2018). Among them are not only extrasensory perception, the capacity to influence autonomic physiological systems in oneself and others, such as in healing, but also effects that go seemingly against our physical reality, such as materializations, levitations, the bending and influencing of rigid material. All this has a long history of being experienced and described, also by observations of anthropologists (Sax, Quack and Weinhold, 2010). There is a long tradition in the Catholic religion that testifies to such special feats. It has been documented that Saint Joseph of Coppersett levitated on more than 200 instances, even in front of his sworn enemies of the inquisition (Grosso, 2016). Many more instances of different kinds of special capabilities, from reading other people’s minds to healing the sick, have been documented in the history of special saints (Thurston, 1952).

Divine or supernatural intervention would not be necessary for any of these special capacities of human consciousness. Most likely these are instances of some conscious capacities under circumstances that we do not as yet understand well enough.

### 5. Summary: Consequences for Science and Our Notion of the World

Clearly, these findings would also impact our notion of reality and our way of doing science. Taken as veridical, following the as-if stance, however, these data lead us to a rejection of a materialist view of the world. It has become commonplace to repeat the adage that science has shown that matter is the ultimate reality and consciousness derived from it. It seems to be rather more difficult than that. We have operated on the *assumption* that a materialist description of the world is sufficient. On that ground, a lot of research has been sidelined, made difficult, or even ostracized. And despite all these efforts, we find those anomalies. Despite all statements to the contrary, we seem to be unable to account for consciousness and these anomalies on purely materialistic grounds.

Whether we need to subscribe to a new version of idealism that takes consciousness as primary I do not know. But it seems that on empirical grounds consciousness is at least co-primary to matter (Chalmers, 2007; Beauregard, 2014). Perhaps the most parsimonious view, which is also most compatible with the empirical evidence, is the idea that there is some unitary reality that manifests as matter and mind, as material and conscious reality, and is somehow extremely well coordinated under normal conditions. But sometimes, under special circumstances, this correlation is either less than perfect; or one can non-locally transcend the correlated restrictions and then exert some influence on other material systems, as in healing; or extract information, as in extrasensory perception; or it may dissociate itself from its physical referent. This would amount to a dual-aspect model of reality, such as Jung and Pauli (Atmanspacher and Primas, 2006), and before them Spinoza and to some degree Leibniz, have proposed. Such a model would surely exclude a crude materialist view of science and would thus lead to a certain spiritualization of science. It would not mean that science has to succumb to religion, especially not to any specific kind. But it might mean that science and religion are less incompatible than some would think (Plantinga, 2011; Ferrer, 2014; Walach, 2015; 2017; Baruss and Mossbridge, 2017). It might mean that science, properly understood, and spirituality, seen as an open experiential mode towards the world and its miracles, are two complementary stances.

This analysis has shown that findings from anomalous cognition research and consciousness studies point towards a broadening of our

view of the world, especially towards giving up a crude type of materialism (Tart, 2009; Schwartz *et al.*, 2018). It certainly means that a materialist stance is possible. The costs are high, though: one has to ignore a large body of evidence to the contrary, and go to great lengths to conjure up explanations as to why all this is wrong and illusory. The analysis has also shown that a broadened view of science is warranted. Such a view should include consciousness as a basic reality. This would also allow for a basic naturalization of religion in many respects. It would not make any religious teachings wrong or superfluous. But it might show that some of them are less compatible with the evidence than others, and that most can be well understood as instances of special ways of conscious functioning. It would relieve God of a lot of burden and make his/her life easier, and it would, in the end, lead to a revision of what most believers think God is. If such an entity exists, he or she is certainly at the same time less involved in the everyday business of managing our lives than we think, because it is we who ultimately decide what is happening. Perhaps we are the gods? Or the hands, the brains, the legs, and the actions of God? And thus, traditional concepts of God and religion would have to be revised as well, as some thinkers, like Whitehead (1929/1978), Teilhard de Chardin (1982; 1990), or others (Griffin, 1989; Ferrer, 2018) have proposed.

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