

Fluid Theodicy: God as Representations in Patterns of Empathy, Emotions, and Conceptual Believing

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Abstract. The term *theodicy* was coined by the philosopher Gottfried Wilhelm Leibniz (1646–1716) and is inherent in the question of how evil can exist if an intrinsically good God guides everything. The publication of this oeuvre initiated intense philosophical and theological discourse in the subsequent centuries, during which many issues that bare upon human well-being were articulated. Also, Leibniz's rational approach to the relationship between *God and evil* raised a number of issues related to the topic of belief. This topic has entangled discourses on theodicy with a long-lasting debate on beliefs, which goes back to Antiquity. Recently, a paradigm-shift shed new light on the understanding of belief. Science has begun to address the neurophysiological mechanisms of the processes that underpin belief formation, modulation, and change. The term *credition* was coined in order to capture and reflect this new and innovative understanding of the fluidity of beliefs and believing. This paper presents various features of a pattern of interrelationships between well-being, theodicy, and credition.

Keywords: credition, bab-blob-configuration, cognitive science, epistemology, coping, brain function, PTSD (posttraumatic stress disorder), religious education, Religionsunterricht.

Introduction

The notion of *fluid theodicy* is uncommon in science and in everyday language. It has emerged from recent interdisciplinary and global research on *beliefs and believing*,¹ which has changed or at least enriched the traditional perspective on belief (and faith).

Also, *theodicy* is a generally unknown term and seems only infrequently used in everyday conversation. In philosophical and theological discourses, theodicy addresses the problem how evil can exist if there is an intrinsically good God who created and is governing the world (Gerlitz 2002).

Credition is a neologism derived from the Latin *credere* (*to believe*) signifying that the topic of discussion has to do with belief (Angel 2013a). But the term was coined in the context of research on religiosity (Angel 2006) to indicate a paradigm shift (Angel 2022b). The term *credition* does not refer to belief or beliefs in a traditional sense, but instead expresses that believing can be described as embodied dynamic processes that originate in the brain and fulfil specific functions in beings – be they humans, mammals, or higher developed vertebrates (Seitz et al 2018). Importantly, *belief* and processes of *believing* do not mean the same thing. In addition, whereas in English *believing* can be used as *gerundium* (in the same way as *learning*), this possibility does not exist in other languages as for instance in German.

To overcome this semantic problem let us approach the concept of fluid theodicy in context of languages. For a discussion in German, the metaphoric expression *fluides Glauben* (*fluid belief*) seems to be helpful as it allows us to highlight the difference between believing and belief (Angel 2022a). Thus, the expression *fluid theodicy* can be understood in

¹ Both terms *beliefs* (i.e. plural) and *believing* have no adequate correspondence in German. *Belief* (singular) means *Glaube*. But for this term does not exist a plural. Therefore, to express the plural of *Glaube* in philosophy often is used the term *Meinungen*. But again, this is only partly a helpful solution as for instance *religious beliefs* cannot be translated with *religiöse Meinungen*. *Believing* (i.e. gerundive) has in English the same semantic structure like for instance *learning*. But this is no possible German syntactic.

the light of this background in German. Because of this, the argument of this paper is that an important perspective on theodicy is to be found in the findings of research on credition.

Intertwined perspective: Although at a first glance the notions of theodicy and credition might seem to have nothing to do with each other, this paper is intended to show that they are interrelated. We will see that this perspective is supported by evidence that the notion of God has representations in various patterns of empathy, emotion, and conceptual believing. Let us examine a few aspects of the theodicy debate which emerge in our horizon when we are using what I'd like to call *credition-glasses*.

1. Theodicy

1.1. Background and implications of a long-lasting debate

The core problem indicated by the use of the term *theodicy* can be stated by the following question: How can God, as the origin of all, be understood as *good* when it is obvious that the world and all life is full of evil, pain, and suffering? The term itself was coined by the famous philosopher Gottfried Wilhelm Leibniz (1646–1716) in his work *Essais de Théodicée sur la bonté de Dieu, la liberté de l'homme et l'origine du mal* [*Essays of Theodicy on the Goodness of God, the Freedom of Man and the Origin of Evil*] and means 'vindication of God'. In the face of the contradiction between an intrinsically good God and the observable evil all over the world the philosopher intended to weigh, in rational fashion as done in a case before a judge in court, the *pros* and *cons* for a justification of God (Murray et al 2016). This intention is expressed in the term *theodicy*, which consists of the two Ancient Greek components: God (θεός [*theós*]) and justice (δίκη [*díkē*]). After the terrible earthquake of Lisbon (1755) the Enlightenment philosopher Voltaire (1694–1778) ridiculed the core notion of Leibniz in his satiric fictional story *Candide, ou l'Optimisme*, which was first published in 1759 (Shank 2022).

The apparent contradiction did not play a larger role in early polytheistic religions because they have both bad and good goddesses. Thus, a kind of celestial ‘division of labour’ was postulated in which both types of goddesses could interact with the world of humans and bring harm or good (Fulton 1974).

Compared with the history of the debate which focussed on this issue, the term *theodicy* itself is relatively young. To retrace its manifold ramification, we must go back in the history of religions to early Babylonian and Egyptian times. Also, we see a richness of approaches to the problem of theodicy by which Israel – at least since its Babylonian exile (5th century B.C.) – reflected its relation to Jahveh. But in course of the emergence of monotheistic religions that understood *God* as the origin and end of all, this contradiction became a particularly crucial problem because there was a seeming (or obvious) incompatibility between God’s goodness and the evil within the world (Rosenau 2002). Therefore, it was mainly the Jewish-Christian understanding of God that was in the focus of the vivid debates in the period of the Enlightenment: How can the Christian God, who should be understood as good, allow or even accept the evil and suffering of his own creation? At one point, rationality-based judgements were often seen as misleading because the “living Christian God” had been degenerated to become a ‘God of philosophers’ (Lennon 2006). In any case, the answers to the problem of theodicy have never reached a satisfying level.

1.2. Theodicy seen through the glasses of *credition*

From a credition based point of view it is noteworthy that theodicy is a language bound concept. This means that it is connected to *one type of beliefs*, called *conceptual beliefs* (see below). But the fundamental problem is much broader and transcends language use and cannot be reduced to a simple clarification of theoretical issues. This paper is intended to present the horizon that is opened when *believing* is understood in the sense of *credition*. First, I will contextualize credition within traditional approaches to discussing belief. Then I will explain that two different, but interrelated models exist to depict processes and functions of believ-

ing. They may be useful in various communication settings. Then I will retrace changes in perspective in the realms of philosophy, theology, and psychology when the issues of theodicy are considered from a perspective grounded in credition research. Finally, I will hint to possibilities which may be given when the terminology of the credition model is used and suggest an innovative strand for further research.

2. Credition: the dynamics of believing

2.1. Belief as topic in the history of philosophy

Belief is one of the most prominent topics of philosophy.² To retrace its history, we must go back to Antiquity when philosophers like Plato and Aristotle intended to develop an approach to what we now call epistemology. As often stated, those two pillars of Western thinking did not always agree; importantly, they had very different views regarding belief (or faith). Also, they didn't proceed in a systematic way as we would expect nowadays. Plato's consideration can be found in different of his various books commonly referred to as *Dialogues*; from Aristotle we do not know of any existing and coherent book or treatise on belief. Additionally, as they used the classical Greek language, a couple of semantic problems must be considered. They also influenced the translation of terms which was especially relevant for the topic of belief. For example, Plato identified three ways to come to knowledge: belief (πίστις [*pístis*]), meaning (δόξα [*dóxa*]), and knowledge (ἐπιστήμη [*epistéme*]). Throughout history this differentiation provoked a fulminant firework of discourses which remain explosive.

2.2. Believing as *credition*

As mentioned above, the neologism *credition* expresses that believing can be described as *dynamic embodied processes which originate in the brain and fulfill specific functions in beings* – be they humans, mammals, or higher

² The attention is restricted only to the Western tradition and Asian or African reflections are eclipsed.

developed vertebrates. The neurophysiological findings will underpin our understanding of beliefs. “It should be emphasized that neither the processes of believing nor beliefs are directly accessible. Rather, they are post-hoc explanatory attributions that are inferred by an observer (one-self as well as others) from what an individual states and from his/her behavior” (Seitz et al 2023, 116). Obviously, credition research can only be done in an interdisciplinary approach (Oviedo 2022). Having said this, let me highlight a few puzzles which may help our initial understanding of the new context for an explanation of believing.

2.2.1. Brain function

“Believing has recently been recognized as a fundamental brain function linking a person’s experience with his or her attitude, actions, and predictions. In general, believing results from the integration of ambient information with emotions and can be reinforced or modulated in a probabilistic fashion by new experiences” (Seitz et al 2023, 113). If believing can be considered as a function of brain processes, this will have some consequences.

First, the capacity of believing is a result of brain evolution. Since the emergence of new cognitive abilities is always connected to modifications and enlargement of the brain,

it is a reasonable presumption that the neural processes enabling belief formation about multifaceted events require more neural resources than those about simple objects. Furthermore, it is also reasonable to hypothesize that the evolution of complex conceptual beliefs in *Homo sapiens* was related to the phylogenetic enlargement of supramodal cortical areas as part of large-scale neural circuits (Seitz and Angel 2020,2).

Second, the capacity of believing must be understood because of the structure of the brain. This throws a new light on the inevitable relevance of believing because it is unavoidable that humans believe – a great many things, conscious and non-conscious. Humans are hardwired for credition. But believing is an extraordinarily complex phenomenon which encompasses physical processes and biological functions of these processes.

2.2.2. Three types of beliefs

Neurophysiological findings show that stable or at least reliable belief(s) may result from distinct types of formation. Three types of belief have been identified. Regarding the involved neural processes, they can be categorized as *empirical*, *relational*, and *conceptual* beliefs.

Empirical beliefs are about objects and relational beliefs are about events as in tool use and in interactions between subjects that develop below the level of awareness and are up-dated dynamically. Conceptual beliefs are more complex being based on narratives and participation in ritual acts. As neural processes are known to require computational space in the brain, the formation of increasingly complex beliefs demands extra neural resources. Here, we argue that the evolution of human beliefs is related to the phylogenetic enlargement of the brain including the parietal and medial frontal cortex in humans (Seitz and Angel 2020,1).

2.2.3. Belief formation

The process of believing produces first what is called a primal belief, which in further ‘steps’ may be adapted or rejected. These ‘steps’ can happen within milliseconds and are partly subliminal (Seitz and Angel 2020, 2). In a final ‘step’, humans can articulate their conceptual beliefs in words. This capacity is probably a result of brain evolution (Seitz and Angel 2022). Already, monkeys are able to produce differentiated “coo-call” sounds for different items (Hihara et al. 2003). This proto-language function most likely requires additional neural resources close to the perceptive and/or pragmatic representation of the items in the brain (Iriki and Taoka, 2012). Regarding these processes, it can be stated that belief formation is a highly complex activity which activates different functions such as perception, learning, memory recall or encoding (Connors and Halligan 2014, Connors and Halligan 2022).

2.2.4. Pathologies of belief formation

It is obvious that all human processes can become pathological. Sometimes, some psychiatric manifestations of psychological disorders look

similar to emotions, thoughts, or behaviour of healthy people. But they may also signify other things (Seitz et al. 2018). Therefore, a deeper understanding of the processes and functions which underpin those manifestations is required and raise the question: The process of believing, mental abnormalities, and other matters of the mind: where do they come from? What are they good for? (Seitz et al 2021). The same should also be expected for beliefs.

As beliefs are supraordinate probability models of subjective relevance about the external world brought about by more basic neural processes in the healthy brain, one has to expect that diseases of the brain are likely to induce the formation of distorted beliefs or a breakdown in the neural processes underlying belief evaluation leading to false beliefs or delusions (Seitz 2021).

When investigating pathological formations of beliefs from a clinical perspective, several types of deviant processes or functions can be observed, such as agnosia, apraxia, and others. Recently and regarding the COVID-pandemic, believing processes were investigated in individuals with bipolar disorders (Tietz et al 2022).

3. Two different time-related models for believing

It is obvious that this paper cannot satisfactorily expand either the processes which underlie believing or their functions. A large amount of literature exists for examining credition processes (Angel et al 2017; Seitz et al 2023; Angel 2023c). When we analyse the literature, we can see that two different approaches are available to describe the complexity of credition. Both are – though in a different manner – relevant for any attempt to bridging the results of credition research with the concept of theodicy.

3.1. A neurophysiological model of believing

The first approach can be labelled the *neurophysiological model of believing*. It was successively further developed, and its basic assumptions, its expansion and neurophysiological finding were described several times

(Seitz und Angel 2020, Seitz 2022). For present purposes it is sufficient to highlight few important aspects.

The central statement about creditions is “no credition without emotion” (Angel 2016). Whatever might be the propositional content of a held belief – it originates in intrinsically emotional processes. They encompass mainly subliminal activities of *valuation*. Thus, believing does – to a certain degree – not reach consciousness. Believing is triggered by *perception* which also biases the starting point of creditions. The result of believing will appear as mental *representation*.

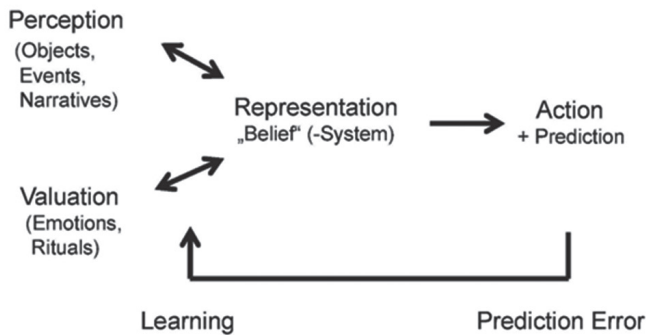


Figure 1. Neuropsychic model of dynamic belief formation

Source: Seitz, Rüdiger J., and Hans-Ferdinand Angel 2020. “Belief formation – A driving force for brain evolution.” *Brain and Cognition* 140, April: 105548. <https://www.sciencedirect.com/science/article/pii/S0278262619303860>.

“Perception and subjective valuation of signals in the environment are re-interactive, bottom-up and top-down processes constituting probabilistic neural representations, e.g. ‘beliefs’. Coding of appropriate actions and of potential outcomes provide the basis for belief reinforcement and updating by learning” (Seitz and Angel 2020). But believing does not take place in isolation because humans always exist in a surrounding environment.

Also, neuroscientific research on the topic of believing has involved the field of social-cognitive neuroscience. This enables us to better un-

derstand the neurophysiological underpinnings of believing when humans interact. Manifold aspects which are well known in social science are coming into the focus of neuropsychological and neurophysiological interest. One of them is empathy.

Observing that another person becomes injured can make one believe that the pain in the injured person is similar to pain that oneself has experienced previously. This first-person perspective has been called empathy and includes primal beliefs about potentially pain eliciting objects and painful events that are projected onto the actually affected person in the sense of ‘what does it mean to you?’ (see Seitz in this volume).

3.2. The *model of credition* as communication tool

The second model is the so-called *model of credition*. It is a functional process model and intends to offer a tool for supporting communication. Whenever a talk strives the topic of belief and believing the application of the model of credition might be supportive. “The model of creditions emphasizes the process character of believing and by this the fluidity of beliefs” (Angel and Seitz 2017). It is conceived to depict the representation of inner experiences that may become object of introspection. Notably, introspection involves conscious awareness and, thus, is always post-hoc. For this reason, a specific terminology was developed. With respect to the three types of belief it can be stated that introspection expressed in the terms of the *model of credition* is a language-based tool. Nevertheless, its abstractness will support a more self-distant reflexion because it allows to translate actual or former experiences into the terminology of the model of credition.

Thus, the model may function as reference figure for any exchange about those kinds of inner experiences. Such an exchange can take place in private as well as in professional talks. For this second case it is self-evident that at least the presenter must have a minimum of background knowledge about believing and some skills in order to use the expressions which provide the model of credition. But of course, any person in a communication situation can use this terminology. It is not too challenging to

get a rough understanding of the model because only about twelve terms must be known.

Also, the model of credition and its terminology have been explained in detail several times (Angel 2017; Mitropoulou 2017; Mitropoulou et al. 2018). Therefore, I will present only a few terms to give a first idea of what the model looks like.

3.2.1. *Bab* and *blob* and their characteristics

“We proposed the term ‘bab’ as an umbrella-term which has the capacity to indicate the basic unit of credition” (Angel and Seitz 2017). This basic term of the model of credition is a neologism which means ‘proposition including its emotion’. The term is needed to integrate cognitive neuroscience findings which brought evidence of the integration of emotion and cognition in the prefrontal cortex (Gray et al. 2002; Schaefer et al. 2007). To express the simultaneity of emotion and proposition the term bab is indispensable. When going deeper into details one can mention that every bab is characterized by four specifications: the propositional content, the emotional moment, the sense of mightiness which does not indicate the valence of an emotion but its intensity, the sense of certainty which reflects an individual’s conviction of the reliability (Angel and Seitz 2017).

Emotions can be of the same type but differ in intensity. Because of this, we need to be able to express the variability of the intensity of emotional loadings of a bab. Propositionally identical babs can differ by the ‘weight’ or ‘mightiness’ of their emotional loadings. To express this dynamic, we introduce the terms mega-bab and mini-bab to signify the mightiness of an emotion. Thus, we have a means to express the potential emotional fluidity of babs.

Within one person, the same propositional content might change from situation to situation and be ‘filled’ or ‘colored’ with a different mightiness of emotional loadings. This fluid or dynamic character of the emotional mightiness of a bab might be called the babushka effect, an expression that may be found in different contexts but has lacked a clear scientific label until now. The term bab is derived from the *Babushka* metaphor. In analogy to the wooden toy babushka, which contains several figures of the same shape but different sizes,

we can understand a bab as a fluid basic unit that transports content (i.e. an abstract proposition) in combination with the specific mightiness of emotional loadings (Angel 2017, 27).

Notably, usually we are not conscious of many of the things which we believe (Teske 2007). Thus, also the model of credition as communication tool must accommodate the subliminal aspects of believing. The term ‘blob’ is introduced to refer to a bab that remains subconsciously hidden. Blobs are non-conscious babs that mediate the influence of the content and degree of a belief on affects, motivations, and actions at a subliminal level (Angel 2017, 28). Accordingly, we can speak of a bab-blob-configuration. This expression is more adequate because it alludes fluidity in contrast to the generally used term mindset.

3.2.2. Functions in the *model of credition*

The model of creditions is a homeostatic one which enables to identify four functions which are embedded in the believing process, and which support the homeostatic balancing of beings.

The **enclosure-function** is a cognitive process that constitutes or modifies propositions (bab-configurations) such as vague ideas, confirmed knowledge, values, or claims about what is moral. The bab-blob-configuration is involved when one questions whether a certain aspect can be believed, i.e., whether that aspect can be propositionally and emotionally integrated into an existing bab-blob-configuration. Thus, the enclosure function is intricately interwoven with the process of perception (Angel 2017, 31).

The **converter function** of credition is set in action when bab-blob-configurations are activated, which is a complex transformation, and which is preliminary to decision-making. The bab-blob-configuration, as specific as it may be, does not force a certain decision or action, but rather, it prepares a *space of action* wherein the decision can take place (Angel 2017, 31).

The **stabilizer function** “by repetition changes fluid bab-configurations into stable attitudes and mindsets. This stabilizing process follows

the Hebbian principle, as associations are learned through repeated experiences of an action with its perceived consequences (Hebb 1949). Therefore, the stabilization of bab-blob-configurations is a necessary precondition for consistent ‘spaces of action’” (Angel 2017, 32). To put it in short terms: There are three basic functions which have to do with perception (enclosure function), with transforming perception into action (converter function), and with constructing or deconstructing reliable meaning (stabilizer function). These three functions we can label as supramodal which means that they are universally given.

The **modulator function** integrates the individuality of believing into the model as it allows to express that the basically supramodal functions are modulated by the individual conditions of any persons. In the model of credition this function

highlights how a creditive process can occur differently in specific ways, between individuals and between situations. Obviously, creditions are interrelated with an individual’s bodily processes including his or her memory, gender, health, disability, and degree of psychic integrity, and are bound to the individual’s level of cognitive and emotional development whether conscious or nonconscious (Angel 2017, 32).

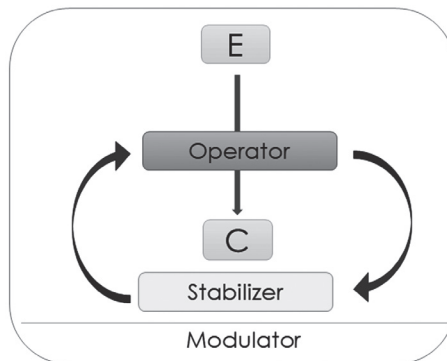


Figure 2. Interdependence of the functions in the model of credition

Source: Seitz, Rüdiger J., and Hans-Ferdinand Angel. 2012. „Processes of believing – a review and conceptual account.” *Review of Neuroscience* 23, no. 3: 303–309. <https://doi.org/10.1515/revneuro-2012-0034>.

The ‘Enclosure Function’ (E) defines the enclosed representation of the perceived stimulus, the ‘Converter Function’ (C) provides the appropriate action in response to the stimulus. By reinforcement learning the putative beliefs are stabilized which is indicated by the ‘Stabilizer Function’. These three supramodal functions are modulated by the internal state of the individual—called ‘Modulator Function’. In the figure the different type of the modulator function is indicated by a thin line (Angel 2022b).

3.3. Intention dependent choice to favour a model

Although both models might be relevant for bridging the topic of theodicy and the topic believing, it will depend on the intention of the users which one will be judged as more appropriate or helpful.

3.3.1. Neurophysiological model

The neurophysiological model might be of greater interest in the contexts of biology (Aguilar-Raab and Ditzen 2017; Berg and Sensen 2017; Holzer 2017; Holzer 2022), medical science (Meißner 2017; Meißner 2022; Dalkner et al 2022), or mathematically based artificial intelligence (Bischof 2017; Lumbreras 2022). Using this model one may address further neuro-scientifically relevant topics like memory (Seitz et al 2023), valuation, perception, energy consumption (Friston 2010), and many other more. Thus, the neurophysiological model might be favoured for analysing the inner conditions of individuals who are suffering.

Notably, any reflection about theodicy based on the neurophysiological model of credition will address God as a mental representation. Of course, this cannot provide any evidence about ontological assumptions about the existence of God or a higher entity. In contrast, it is possible to talk about the mental processes which lead to specific presentations of God. Further, individual God-representations can be compared with each other and with the positions about God as elaborated in the context of dogmatic teachings, theology, or religious science. Additionally, because believing itself might be influenced by pathological processes as described from a clinical perspective, the actual results of mental representations of God might become accessible to therapeutic or medical approaches.

3.3.2. Communication model (*model of credition*)

The *model of credition* might be helpful for talking about the meaning of individual or collective suffering. But it also can be supportive when one intends to talk about believing processes in a more general way. This might happen in different communicational contexts, as for instance in counselling (Wagner-Skacel 2022), pedagogics (Mitropoulou 2017, Mitropoulou et al. 2018), law (Marko 2017), economy (Sturn 2017; Willfort and Weber 2017; Bergner et al. 2022), technics (Hick et al. 2020; Kranabittl et al. 2021), ecology and sustainability (Zimmermann and Angel 2016; Angel and Zimmermann. 2016; Oviedo et al. 2022), Christian theology (Oancea 2017; Davies 2022; Angel 2022c), or Buddhism (Forman 2022). Especially helpful the model of credition might be in the context of religious communication, religious education, or even in school context --- for instance in what is called in German 'Religionsunterricht'³ (Rothgangel et al 2023; Angel 2023a; Angel 2023b). Notably, in all these fields theodicy might become a burning issue. Helpfully, the model of credition then can be used as communication tool in a manner similar to the use of Eric Berne's model of transactional analysis (TA), Ruth Cohn's model of *Themenzentrierte Interaktion* (TZI), or Friedemann Schulz von Thun's communication rectangle (*Vier-Ohren-Modell*).

In contrast to those models, which are basically static, the *model of credition* highlights the ongoing inner dynamic and its functions for the balance of the human system. Thus, it is time-related and mirrors the dynamics of different belief states along the timeline. Therefore, it is more complex than the models named above. Nevertheless, one can easily learn it because only about ten terms and their meanings must be known. For example, while in the *neurophysiological model* God is conceived as *representation* that originates from the combined processes of valuation and perception, in the *model of credition* this representation is

³ The German term *Religionsunterricht* cannot be adequately expressed in English because the structure of public schools is different in German and in English speaking countries. *Religionsunterricht* is a standard subject in the curriculum of *public* schools in German speaking countries. Usually, two different English notions are proposed to express that what is meant by *Religionsunterricht*, namely *religious instruction* or *religious education*. But both do not express in a correct manner the notion *Religionsunterricht*.

depicted as a bab. Just as every other bab, a ‘God-Bab’ is characterized by the four characteristics ‘emotional loading’, ‘emotional mightiness’, ‘propositional content’ and ‘degree of certainty’ which is attributed to the proposition. Using the model, it will be understandable – or even very apparent – that it has different effects when participants within a communication setting have integrated their ‘God-Bab’ as mega-bab or as mini-bab.

4. Contextual perspectives on theodicy influenced by credition

A fluid understanding of believing will have an impact on which philosophical positions are considered to be relevant. The findings about the fluidity of believing might stimulate a more profound paradigm change in several fields. Let us examine three of them: philosophy, theology, and psychology.

4.1. Philosophical context

From a philosophical point of view two aspects might become relevant when reflecting on the relation between credition and theodicy.

4.1.1. Philosophy of process and credition as applied process-theory

“Because the concept of creditions focuses explicitly on the elements of the process of believing, and because any process that happens can happen only through time, we must include time in how we come to understand believing” (Angel 2017, 22). Credition refers to bodily processes. In a specific sense it can be understood as an applied process-theory. Therefore, philosophical concepts underpinning processual thinking attain higher relevance. Processual attempts to interpret the world are known since Antiquity. The most famous attempt might be that of Heraclitos – his understanding of the world as fluid. The expression *panta rhei* became a slogan. In modern times it was primarily the ground-breaking metaphysics which Alfred North Whitehead elaborated in his book *Process and Reality* (Whitehead 1978). Following the philosophical line of process

thinking, other authors can be named such as the French process thinkers Henry Bergson (Bergson 1907) and Gilles Deleuze (Deleuze 1968).

4.1.2. Process-related terminology

One consequence of an understanding of credition as applied process-theory is that there is a higher relevance for a specific process-related terminology, such as, e.g., emergence, trajectory, function, rhizomatic, and so on. Process-philosophers hint vigorously to this aspect (Koutroufinis 2007). Although it is necessary to mention this crucial aspect of credition, it is not possible to go deeper into the impacts which such an approach can have on the concept of fluid believing. Process-theoretic terminology needs to be integrated into the concept of credition.

4.2. Theological context

All considerations based on a credition theory will address God as a mental representation whose origins can be found in the three different types of beliefs, namely empirical, relational, and conceptual (see above). The relevant neurophysiological findings can be helpful to reflect the relation of credition and theodicy. In contrast to the monolithic semantic meaning of the term *belief*, they allow us to conceive of our concepts of God in a more specific way. For example, it is possible to ask which type of belief is activated when talking about God. Importantly, this approach does not include ontological positions about the existence of God. To give this reservation understandable ground it is necessary to distinguish between religion and religiosity (see 4.3).

4.2.1. God in the focus of different types of belief

From a theological point of view, two aspects of credition might become relevant: first, that the conceptualization of God is connected to one of the three types of beliefs, and second, that for an understanding of religious experiences a semantic differentiation is indispensable, namely between the terms religious, religion, and religiosity. On this base it might be promising to suggest a research perspective which uses the terminol-

ogy of empirical, relational, and conceptual beliefs to spell in a more sophisticated manner concepts like *beliefs in God, in the good, in a higher entity, or in whatever*. As the logic and terminology of the credition model are elaborated and hypotheses are generated and tested with an interest in practical and scientific progress it could be a major contribution of new research to elaborating this issue regarding the issue of theodicy. To allude to this possibility, the subtitle of this paper uses the terms empathy and emotion was chosen.

4.2.2. God-representations as result of empirical belief

The perspective which tries to approach God as consequence of empirical beliefs might focus on the debate within several realms. It is closely related to rationality-based discourses about the existence of God. Alongside the history of philosophical thinking, we may come upon topics like the *unmoved mover* (Aristotle) or the *God of philosophers*, a concept much discussed in times of Enlightenment. Following these traces, we can expect that all the problems connected with any attempt at a proof of God's existence will appear in a new fashion. The same would be the case if the contradiction of God's goodness and the evil in the world were to be illuminated. And again, every approach to understand God as result of empirical beliefs cannot contribute to ontological assumptions.

4.2.3. God-representations as result of relational belief

The perspective which tries to conceive God as consequence of relational beliefs will pass over topics like the *suffering God, God's compassion* or, the topic of a *comforting God*. The terrors of the 20th century, especially the holocaust, pushed forward this more human face of God who suffers with his people.

Additionally, all aspects of credition that highlight divine *movements* could be counted as reflecting this type of belief. In the context of Christian theology this could be the topic of trinity as movement between the Three Divine Persons in the Godhead – *Father, Son, and Holy Spirit*. The reflection about how to interpret the biblical testimony which is given in

terms of father or spirit was a source of extensive and highly controversial debates about the nature of Christ which lasted for centuries. From the 4th to the 7th centuries clearer contours were conceptualized by small steps and finally solemnly accepted as Christian dogma. One of the reasons for the long duration of this process of clarification was that the Greek language (which was the then ‘modern’ Greek called κοινή (*koinè*)) did not provide the needed terminology to express the experiences depicted in the Scriptures. Importantly, for example, the trinitarian concept of a living God who sent his own *Son* to redeem the world is one of the primary ideas that separate the Christian (i.e.: Jesus is as Christ [Χριστός (*christós*): anointed] the son of God) and Muslim (i.e.: Jesus is one of God’s prophets) understandings of God and God’s interaction with the world.

4.2.4. God-representations as result of conceptual belief

The perspective which tries to approach God as a consequence of conceptual beliefs will at first highlight that all conceptual beliefs are language-bound. Consequently, they are part of the semantic and grammatical possibilities provided by former and current languages. For this approach the linguistic turn in philosophy as well as the finding about the ontogenetic development of language will be of specific relevance. For instance, there is a huge difference between whether God is conceived as an ‘external entity’ as in the typical case when He is understood in the sense of ‘the God of philosophers’, or whether He is conceived of in the tradition of ‘Deus intus’ (Latin: *God as part of the inner self*) which also originates in Antiquity and can be found for instance in the *epistulae morales* (ep. 41) of the Stoic philosopher Lucius Annaeus Seneca (Reynolds 1978). Although a conception of *God as external reality* may lead to the question, “*Why does God allow or accept evil?*”, the conception of *God as inner reality* may lead to the question, “*Why do humans act on the basis of their God-representation in a way that makes others suffer?*”.

Finally, further research should expand the relevance of the three types of believing to address issues pertaining to ontogenetic development. Such issues have yet to be tackled in the Credition Research Project even though the topic of development is central in the psychology of re-

ligion (Richert and Granquist 2013; McFadden 2013). Nevertheless, it can at least be stated that the intersection of the three types of belief may influence how children explore, verify, and maintain their God representations as they develop their individual religiousness.

4.3. Semantic context

Focusing on the semantic context will highlight both the meaning and the common language uses of three important terms: religion, religiosity, and religious.

4.3.1. Steps out of the fixation on *religion*

In doing research on belief, it is important to differentiate between religious believing and believing other things. This matter has been thoroughly discussed (Oviedo and Szocik 2020). Creditions contribute to develop the religiosity of individuals, but they have nothing to do with religions. To make this important point understandable, let us work through the following steps. First, it is necessary to carefully distinguish between religion and religiosity (Angel 2013b). Second, acknowledge that our common language use can be misleading. To illustrate, due to the history of European thinking, our languages typically put the emphasis on the use of the adjective *religious*. Third – and again as consequence of the history of European thinking – a perspective has developed that placed all *religious* phenomena within the notion *religion(s)*. Forth, religion “became the central component in the denotation of a couple of newly established scientific disciplines like history of *religion*, psychology of *religion*, sociology of *religion*, philosophy of *religion*, phenomenology of *religion* (in German additionally: *Religions-wissenschaft*, *Religions-pädagogik*, *Religions-didaktik*, *Religions-unterricht*), and so on” (Angel 2022, 93). Fifth, “to relate *religious* (= adjective) phenomena exclusively with religion is an inadequate unidirectional perspective. It has become possible because no theoretical interest exists to clarify the function of the adjective *religious*” (Angel 2022, 93). Finally – and most importantly, *religious* is a ‘double-wing’ adjective which covers two substantive concepts – *religion* and *religiosity*. But as used in our common language, *religious* is most often narrowly asso-

ciated with *religion*, whereas its association with *religiosity* less common. I labelled these complications as “the hidden problems of the double-wing adjective ‘*religious*’” (Angel 2020, 94). To avoid struggling with the clarification or definition of religiosity, the adjective *religious* is predominantly used. Thus, the use of the adjective *religious*, combined with its quasi-natural association with *religion*, became an intellectual and scholarly burden because it hindered theoretical interest in understanding religiosity.

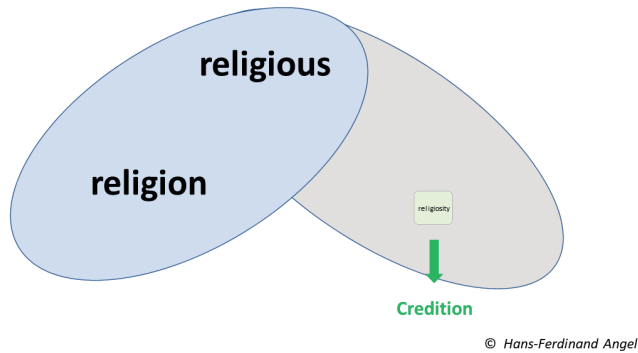


Figure 3. Credition as part of religiosity

4.3.2. Creditions are part of a theory of *religiosity* (*religiousness*)

Clarifying the meanings of key terms as we engage them in credition research is even more complicated in an Anglo-American context because it distinguishes between religiosity, religiousness, and spirituality – an exploration beyond the scope of the present essay. But even without a deeper clarification, a clear distinction can be made between *religion* and *religiosity* as two different concepts that will be indispensable for any approach to the issues covered under the umbrella of theodicy.

When referring to credition in a *religious* (!) context, it must be made clear that religiosity, not religion, is the focus. It is essential to be clear about this differentiation between religion and religiosity because concepts about religiosity can be related to psychological theories and are

therefore relevant to credition research on the processes of believing, whereas concepts about religion or religions as more static and doctrinal entities cannot.

Accordingly, many of the problems which are inherent in the topic of theodicy may be unsolvable within the framework of religion, although there might be approaches to explore and solve those problems within the framework of religiosity. This means that instead of talking about the propositional content in religions attributed to ‘God’, it may provide another perspective to talk about the ambiguous emotional loading of a bab with the content ‘God’. Thus, the capacity to tolerate or accept ambiguity might come into focus. In terms of the model of credition, this can be expressed by the question: “Can you enclose into your *bab-blob-configuration* a *mega-bab* with the propositional content ‘ambiguity is to accept’?”

4.4. Psychological context

Thinking psychologically, the topic of theodicy can be approached as an attempt to grapple with a contradiction. This attempt can be understood as a coping process. Coping processes involve believing (Pargament et al. 2013).

Although credition as mental process with different functions has been introduced into scientific literature more than a decade ago (Angel 2006; Seitz and Angel 2012; Angel 2013a; Angel 2022b; Seitz and Paloutzian 2023) the relation between coping and believing has not been explored in a deep sense as a challenge for scientific research. Nevertheless, first attempts have been made. For example, one aspect of a coping process is how someone hands and responds to expectations. It has been shown that responding to expectations as well as their violations are functions of credition processes (Angel and Seitz 2017).

To expand the radius of the field and to provide some suggestions for further research and levels of application, the model of credition may be exploited in greater depth and applied to new problems. The first (perhaps obvious) extension focusses on coping as struggle with the results – or better – non-results of a theoretical clarification of the contradictions

evident in the concept of theodicy. It might be more than a theoretical interest how people respond when they find themselves trapped in the crosshairs of how their loving and intrinsically good God let evil fall upon them. Such real-life events are at the heart and soul of the paradox of theodicy. A second extension brings coping concepts onto a more practical level and illuminates the possibilities of behaviour for and by suffering persons. Believing processes are activated in both these extensions of the credition concept.

4.4.1. Coping as struggle with theoretical inconcinnities

On a theoretical level, be it philosophical or theological, the theodicy contradiction is positioned on a horizon in which one tries to interpret the misery of life in the face of God's attributes like goodness and almightiness. To manage contradictions is a challenge for our human system to sustain a state of inner balance. This system may be activated by the search for an answer to the question 'why' for suffering, or more generally expressed by the search for meaning (Paloutzian and Park 2015; Paloutzian and Mukai 2017). When referring to this theoretical level the link to credition is given because the inner balance system is supported by believing. Insofar the balancing capacity is related to credition, believing contributes to maintaining or regaining inner balance.

Expressed in the terms of the model of credition: the maintenance of balance also depends on the emotional-propositional shape of the mega-bab which somebody conceives as central. If there exists a mega-bab which allows someone to integrate all experiences of misery *finally* in 'the hands of a merciful God' the inner condition might be remarkably different from that in someone who holds a mega-bab with an emotion-propositional shape of despair and senselessness. But additionally, it must be kept in mind that any use of words to express a conceptual understanding of God's position toward evil is based on conceptual beliefs which are always language-bound. Therefore, any talk about the relationship between God and misery in a language-based manner might be counter-productive for those who suffer and who must find their individual mode to maintain balance.

4.4.2. Coping in the face of real suffering

On a practical level the topic of theodicy includes the issue of coping in the face of existential and real suffering. This may be facing experiences when oneself gets hit by the misery of the world and is exposed to painful illness or suffering. It also may be a matter of responding to experiences when it comes to encounters with others who suffer. In both cases, essentially subjective approaches are needed. Coping can be understood as a process of searching for momentary answers to those situations, and in some way including effective and affective reactions to such challenges. In any case, processes of emotions and valuations are activated which influence the individual's self-perception and self-understanding.

In the struggle of how to cope with all these inconsistencies and uncertainties, it will be the person's credition system that influences and guides an individual's decisions and actions. Different parameters like resources of individual energy, the ability of to understand and feel compassion, or the degree of empathy or the contextual frame of other duties might play a crucial role for the individual process of believing. Many experiences which may appear during or after situations of turmoil, misery, or pain are traumatic. On a more professional level, knowledge about traumatisatation and the dynamics of those processes affiliated with post-traumatic stress disorder (PTSD) will play a significant role. Such knowledge might influence the decisions and the chosen behaviour toward those who had been exposed to depressing experiences.

The theoretical implications of PTSD concepts (McNally 1994, 2003, 2011; Bessel van der Kolk 2014; Gournay 2015) are of highest interest also for future credition research especially when they provide neurophysiological evidence. Generally, it can be hypothesized that in all these cases believing process will influence meaning-making (Park 2022). Additionally, all three types of believing processes might be involved in the coping process. There might be subliminal stimuli which are the first trigger primal beliefs. Empirical beliefs might be involved when material resources are checked. Relational beliefs may play a role when tiny and almost unrecognizable signals are perceived or when expressions of *body language* appear as reactions to those stimuli. Conceptual beliefs will be involved

when oral language is used to express proximity or affective inclination or reluctance.

5. Further discussion

Two directions or two possible strands of further discussion can be highlighted. One of them addresses issues and topics within the credition research project, the other reflects how the theodicy debate might get inspired by integrating the topic of credition.

5.1. Impulses for the credition research project

It would be inspiring to expand the manifold impulses that occurred when reflecting the issue of theodicy.

Indeed, the issue of theodicy can inspire further credition research. This was already mentioned above regarding. Here only can be added that the role of memory is crucial for understanding credition (Seitz et al. 2023) as well as for understanding PTSD – a topic which is vividly discussed.

Another aspect has been raised during the conference⁴ *Pain and Suffering: From Problematic Experience to Knowledge and Solution*: How believing can be understood with respect to the ability that humans are able to develop and maintain “supraordinate concepts” (see Seitz in this Volume)? Religions are ‘containers’ for such kind of supraordinate concepts, and people who feel attached by religions may also be ready to ‘reflect’ about their dogmatic propositions and finally to ‘accept’ them. The same might be the case for ideologies, as for instance Marxism-Leninism. The difference between them can be seen in the proposed central mega-bab(s). It makes of course a difference for individuals whether they are invited to accept as *mega-bab* a ‘loving God’ or an ‘omnipotent political party’. Theodicy tackles the challenge which is given by the *relation* between a loving God and the evil in the world. With the same methods, the issue

⁴ It was held from 16th to 17th November 2023 in Rijeka (Croatia).

could be addressed how the *relation* between a political party and the evil in the world can theoretically be explained.

But this article is primarily intended to depict pathways that may integrate the results of credition research into the traditional or ongoing discussion on theodicy in the sense of a Christian God. Of course, many questions remain open. If they become topics in future research, they will certainly be influenced by the starting points of the perspectives already taken. For example, one starting point may be labelled as translation, and highlights possibilities of an application of the model of credition. In a second starting point, one may consider how the influence of credition research on theodicy can be connected to morally relevant behaviour or to debates in moral philosophy and ethics. Under the headline Credition and the Good. I will suggest that two strands may be taken into consideration.

5.2. Translation into the language of the models presented

There are many approaches to an understanding of the individuality and complexity of coping strategies. In addition to such strategies, it might be interesting to explain the psychodynamics of coping considering the *neurophysiological model of believing*, which can also be expressed in terms of the *model of credition*. The following consideration will refer only to the *model of credition*. It can be used in any discussion and can be applied to specific settings or contexts such as counselling. Of course, a minimum of knowledge of the credition model must be presumed to make them fruitful.

5.2.1. The application of the terminology of the model of credition

It may be useful to give an example that may convey an initial understanding of how to use the terminology of the credition model in a general manner. For present purposes I will omit some considerations that are needed when it is necessary to differentiate between a personal encounter with affected people versus scientific coping theories.

Also, I will omit discussion of suffering that is intentionally *produced* in wars, genocide, torture-chambers, or camps of detainment. I will refer

only to natural catastrophes such as earthquake or floods. The restriction of this discussion to natural catastrophes has one of its roots in the history of discussions about theodicy which, as previously mentioned, is connected to the earthquake of Lisbon. Importantly, however, both sources of evil – human atrocity and natural catastrophes – contribute to the phenomenon that the number of refugees worldwide is growing rapidly and is now a first-order challenge across the globe. In addition to the need for material support, it is also important and supportive to understand the coping processes the affected persons (Paloutzian and Sagir 2019; Paloutzian et al 2021). Credition concepts and research can help service these needs.

The tsunami of Fukushima constituted a disaster in which, with the aid of psychology, it was hoped that credition research might help efforts to understand the kinds of self-concepts that best helped survivors after the catastrophe. It was found that coping processes that take place in times of catastrophes are also underpinned by believing (Sugiura 2022). One aspect of this positive effect is the ability of self-transcendence.⁵

In such kind of communicational settings, it might be helpful to express the various aspects of believing in the terminology of the model of credition. This terminology might also be a suitable tool to direct the flow of a communication into specific directions:

- Perception is connected to the ***enclosure function***. In times of catastrophes the inner balance-system might be disturbed. This affects all kinds of perceptions as there are self-perception, perception of others who suffer, or perception of the environmental conditions in which those who suffer live. When focussing on the enclosure function the role of perception for believing may become a central aspect of the process. Which babs, especially which megababs, are dominant for finding strategies to keep or regain inner balance?

⁵ During the *Structure of Credition-Conference* in Graz 2022 there was a long debate about the understanding of transcendence which provided insight into the need of a clarification of the relation between horizontal and vertical transcendence.

- Coping usually implies long lasting and time-consuming inner dynamics. In the model of credition the **stabilizer function** is connected to the course of time. Thus, it is likely that in course of time it will come to a reorganisation of inter-babial relations. It might also be expected that during coping-periods mini-babs, or even mega-babs, will be exchanged. This does not imply a change of their propositional character but also a modification of their emotional loading or their degree of certainty.
- In the model of credition the individuality of everyone's believing process is connected to the **modulator function**. Since PTSD will be one of the phenomena which often can be observed in the context of catastrophes, it will be influential to believing. To articulate those disturbances in the terms of the model of credition one will mainly refer to the modulator function.

5.2.2. The application of the model of credition in specific fields

It has been alluded in former paragraphs that the use of the model of credition might be of special interest for professional settings of communication like counselling, coaching, or psychotherapy. Space constraints preclude expanding this point, but it might be helpful to mention a few of its aspects.

Creditions are not *religious* (!) (see above). Also, the model of credition is not religious. It can be used to verbalize both secular and religious experiences. Therefore, it might be helpful for any intention to express religious experiences in a more formalized manner. Following the examples which were given in the *Handbook of Psychotherapy and Religious Diversity* (Richards and Bergin 1999), it could be used to articulate propositional contents within Christianity, Judaism, Islam, or Eastern traditions and to connect them with subjective emotional loading. The result of this combination can be conceived as a bab or – probably more often – as a bab-configuration. This may be the base for further communication about the mightiness of such an emotional loading or the degree of certainty of the propositional content. One the other hand, since believing itself might become pathological the combination of the model of credition and

the neurophysiological model of believing might be helpful to illuminate the sliding processes between psychotherapeutic and clinical approaches. This might also open new research perspectives for the intersection of *religion and the clinical practice of psychology* (Shafranske 1996). As mentioned above, some initial approaches have been made to direct the attention to the general field of believing and psychiatric disorders or the role of believing in individuals with bipolar disturbances.

5.3. Credition in the intersection of epistemology and ethics

At the beginning of this paper the attention was drawn to *belief as topic of epistemology and philosophy of mind*. But the topic of believing is also located within the in the *intersection of epistemology and ethics*.

5.3.1. Believing in the Good

For the intention of this paper, it is sufficient to mention only one strand of this long philosophical discussion. It might be known under the label *rationality and the Good* and follows the manifold traces which have been pathed by Robert Audi in his influential books *The Good in the Right* (Audi 2005) and *The Ethics of Belief* (Audi 2008). Analysing the oeuvre of Audi, one could list many examples of how he uses the term belief. To give just one example: "For most of the everyday cases of belief-formation 'accept' does not even seem natural. Where 'accept' is natural (for propositions), it contrasts with 'reject' and 'withhold'; and in that probably central use, acceptance does not entail belief" (Audi 2007, 226). Such examples can make it evident that *belief* plays a vital role in human efforts to figuring out the core of ethics and morality. Nevertheless, such discussions are not connected to the neurophysiological debate on the fluidity of believing. Therefore, believing in the sense of credition does not fit into the above-mentioned discourse, which is characterized by two main presumptions: (1) It does not take into consideration the dynamics of believing processes which underpin any stable belief, and on a linguistic level it is an indicator for this more static understanding that the terms belief(s) or faith appear in a grammatical sense mainly as nouns; (2) It cannot be avoided

that my intention to put the discourse about theodicy into a broader horizon will have an impact also on the foundation of ethical concepts. It would be attractive to see what happens when the positions held in the field ethics and epistemology would be connected to the field of believing in the sense of credition.

5.3.2. Believing in the belief of the existence of a Good

For some researchers, the heading *believing in the belief of the existence of a Good* may allude to the debate about free will. And indeed, it points to neurophysiological findings which are connected to the issue of voluntary decision-making – i.e., are choices made based on free will, or are they determined? Here *believing in the existence of a Good* can be bridged to that phenomenon which philosophers call *free will*.

Years ago, the so-called Libet-experiment provoked vigorous philosophical discussions about the role of free will (Libet 1985; Libet 2004). Although it might be difficult to explain exactly what the notion free will means, the Libet-experiment gave impulses to further research. For instance, two research groups in Berlin, one organized around John-Dylan Haynes (*Bernstein Centre for Computational Neuroscience*), the other centred around Benjamin Blankertz and Matthias Schultze-Kraft, found evidence that “subjects can exert a ‘veto’ even after onset of this preparatory process”. This must happen under the condition that the ‘veto’ arrives before a point-of-no-return is reached. These findings fitted together with those which postulated that inducing disbelief in free will alters brain correlates of preconscious motor preparation: the brain minds whether we believe in free will or not (Rigoni et al 2011). These findings suggest that it makes a difference whether humans believe in free will or not. The so-called free will beliefs have impact of human behavior.

Starting from this neurophysiological free-will-debate I would like to draw attention to a possibility which has not been a focus of research so far. I suggest the hypothesis that the topic of *a belief in free will* and the topic of *a belief in the Good* have similar neurophysiological effects. This possibility should at least not be excluded, and future research might have a look at this issue.

I hypothesize that one can draw conclusions from the neurological debate on belief in free will and perhaps apply them to understanding a belief in the goodness of God. Although it is to be expected that in the sense of empirical belief, no theoretical answer will be possible even though one can assume that on a subjective – first person level – answers will be possible. The question will be: What does it mean to me when I *believe in the existence* of an ultimately good God?

Conclusion

From a credition perspective is to be expected that the answer to a research question will often not be stable -- as if it were an empirical fact and cannot change. The same might be the case with personal answers to issues of everyday life. Believing is an ongoing process modulated by new experiences and novel integration of valuations which whose contents may emerge from a subliminal realm entering the realm of conscious awareness. At the end of my paper, which was intended to integrate results of credition research into the context of theodicy, I suggest that humans will all benefit from a research project which highlights the effects resulting from the *possibility of believing* in the belief of the existence of a Good.

References

- Aguilar-Raab, Corinna, and Beate Ditzen. 2017. "Neurobiological Factors Underlying Attachment and Trust in the Believing Process." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 83–95. Cham: Springer.
- Angel, Hans-Ferdinand. 2006. „Religiosität als menschliches Potential. Ein anthropologisches Modell der Religiosität im neurowissenschaftlichen Horizont.“ In *Religiosität. Anthropologische, theologische und sozialwissenschaftliche Klärungen*, edited by Hans-Ferdinand Angel, Martin Bröking-Bortfeldt, Ulrich Hemel, Monika Jacobs, Joachim Kunstmann, Manfred Pirner, and Martin Rothgangel, 62–89. Stuttgart: Kohlhammer.

- Angel, Hans-Ferdinand 2013a. "Credition, the process of belief." In *Encyclopedia of Sciences and Religion*, edited by Anne L.C. Runehov, and Lluís Oviedo, Vol. 1: 536–539. Dordrecht: Springer.
- Angel, Hans-Ferdinand. 2013b. "Religiosity." In *Encyclopedia of Sciences and Religion*, edited by Anne L.C. Runehov, and Lluís Oviedo, Vol 4: 2012–2014. Dordrecht: Springer.
- Angel, Hans-Ferdinand. 2016. "No believing without emotion: The overlapping of emotion and cognition in the model of credition." *Studies in Science and Theology (SSTh)* 15: 215–222.
- Angel, Hans-Ferdinand. 2017. „Credition: From the Question of Belief to the Question of Believing." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 17–36. Cham: Springer.
- Angel, Hans-Ferdinand. 2020. "A History of the Evolution of Religion: From Religion to Religiosity to the Processes of Believing." In *The Evolution of Religion: How Biology, Psychology, and Theology Interact*, edited by Jay Feierman, and Lluís Oviedo, 87–103. New York: Routledge/Taylor & Francis.
- Angel, Hans-Ferdinand. 2022a. *Credition: Fluides Glauben*. Baden-Baden: Deutscher Wissenschaftsverlag.
- Angel, Hans-Ferdinand. 2022b. "Pathways and crossroads to creditions: Insights from a retro-perspective view." *Frontiers in Psychology – section: Theoretical and Philosophical Psychology*. <https://doi.org/10.3389/fpsyg.2022.942590>.
- Angel, Hans-Ferdinand. 2022c. „Glauben als dynamischer Vorgang." In *Ange wandte Theologie interdisziplinär*, edited by Ralf Gaus, and Andreas Leinhäupl, 109–16. Grünewald. Ostfildern.
- Angel, Hans-Ferdinand. 2023a. "Credition – Process of Belief – Glaubensvorgang. Ein Überblick und mögliche Impulse für die Religionspädagogik." *Theo-Web. Zeitschrift für Religionspädagogik* 22, H. 1: 19–46. <https://doi.org/10.23770/tw0286>.
- Angel, Hans-Ferdinand. 2023b. *Credition und Religionspädagogik: Von Glaube zu Glaubensvorgang (Credition): Ein für die Religionspädagogik hilfreicher Perspektivenwechsel?* <https://doi.org/10.25364/109.2023.1>.
- Angel, Hans-Ferdinand. 2023c. *Credition – The Research Website*. <https://credition.uni-graz.at/de/> [accessed 2023-10-25].
- Angel, Hans-Ferdinand, Martin Bröking-Bortfeldt, Ulrich Hemel, Monika Jacobs, Joachim Kunstmann, Manfred Pirner, and Martin Rothgangel. 2006. *Religi-*

- osität. *Anthropologische, theologische und sozialwissenschaftliche Klärungen*. Stuttgart: Kohlhammer.
- Angel, Hans-Ferdinand, and Rüdiger J. Seitz. 2016. "Processes of believing as fundamental brain function: the concept of credition." *SFU Research Bulletin* 1: 1–20. <https://doi.org/10.15135/16.4.1.1-20>.
- Angel, Hans-Ferdinand, and Zimmermann, Friedrich. 2016. „Nachhaltigkeit: (Fast) reine Glaubenssache." In *Nachhaltigkeit wofür? Von Chancen und Herausforderungen für eine nachhaltige Zukunft*, 257–83. Berlin–Heidelberg: Springer. <http://www.springer.com/de/book/9783662481905>.
- Angel, Hans-Ferdinand, and Rüdiger J. Seitz. 2017. „Violations of Expectations as Matter for the Believing Process." *Frontiers in Psychology. Section: Cognition*. Vol. 8. <https://doi.org/10.3389/fpsyg.2017.00772>.
- Angel, Hans-Ferdinand, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz. 2017. *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*. Cham: Springer.
- Audi, Robert. 2005. *The Good in the Right: A Theory of Intuition and Intrinsic Value*. Princeton: Princeton University Press.
- Audi, Robert. 2007. "Justifying Grounds, Justified Beliefs, and Rational Acceptance." In *Rationality and the Good*, edited by Mark Timmons, John Greco, and Alfred R. Mele. Oxford: Oxford University Press.
- Audi, Robert. 2008. "The Ethics of Belief: Doxastic Self-Control and Intellectual Virtue." *Synthese* 161: 403–18. <https://doi.org/10.1007/s11229-006-9092-2>.
- Berg, Gabriele, and Maria Sensen. 2017. "Decision-Making and Credition Under a Microbial Perspective." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 443–50. Cham: Springer.
- Bergner, Sabine, Robert Rybnicek, and Karl Koschutnig. 2022. „Leadership and credition: Followers’ neural response to leaders who are perceived as transformational." *Frontiers in Behavioral Neuroscience – section: Emotion Regulation and Processing*. [Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing. Special issue.] <https://doi.org/10.3389/fnbeh.2022.943896>.
- Bergson, Henry. 1907. *L'Évolution créatrice*. Paris: Felix Alcan.
- Bischof, Horst. 2017. "Creditions and Modern Computer Science." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, and Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 399–404. Cham: Springer.

- Buccino, Giovanni, and Ivan Colagè. 2017. "New Concepts on the Motor System: Implications for Emotions and Credition." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 97–109. Cham: Springer.
- Colagè, Ivan, and Nicola Gobbi. 2017. "Creditions and Self-Identity: Embodiment Between Actions and (Life) Decisions." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 247–62. Cham: Springer.
- Connors, Michel, and Peter Halligan. 2014. "A cognitive account of belief: a tentative road map." *Frontiers in Psychology*, 5, 1588. <https://doi.org/10.3389/fpsyg.2014.01588>.
- Connors, Michel, and Peter Halligan. 2022. "Revealing the Cognitive Neuroscience of Belief." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fnbeh.2022.926742>.
- Dalkner, Nina, Eva Fleischmann, Frederike T. Fellendorf, Jolana Wagner-Skacel, Elena M.D. Schönthaler, Susanne Bengesser, Alfred Häussl, Sophie Tietz, Adelina Tmava-Berisha, Melanie Lenger, and Eva Z. Reininghaus, 2022. "COVID-19 vaccination motivation and underlying believing processes: A comparison study between individuals with affective disorder and healthy controls." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fpsyg.2022.935278>.
- Davies, Oliver. 2022. "The architecture of creditions: Openness and otherness." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. doi.org/10.3389/fpsyg.2022.926489.
- Deleuze, Gilles. 1968. *Différence et Répétition*. Presses Universitaires de France.
- Forman, Jed. 2022. "Believing is seeing: A Buddhist theory of creditions." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fpsyg.2022.938731>.
- Friston, Karl. 2010. "The free-energy principle: A unified brain theory?" *Nature Reviews Neuroscience*, 11: 127–38. <https://doi.org/10.1038/nrn2787>.
- Fulton, William. 1974. "Theodicy." In *Encyclopedia of Religion and Ethics*, 2nd ed. Vol. 12: 289–91.

- Gerlitz, Peter. 2002. „Theodizee I. Religionsgeschichtlich.“ In *Theologische Realenzyklopädie*, Bd. 33, 210–15. Berlin: De Gruyter.
- Gournay, Kevi. 2015. *Post-Traumatic Stress Disorder. Recovery After Accident and Disaster – Overcoming Common Problems*. Sheldon Press. London.
- Gray, Jeremy R., Todd S. Braver, and Marcus E. Raichle. 2002. “Integration of emotion and cognition in the lateral prefrontal cortex.” *Proceedings of the National Academy of Sciences* (PNAS) March 19, 99 (6): 4115–20. <https://doi.org/10.1073/pnas.062381899>.
- Handbook of Psychotherapy and Religious Diversity*. 1999. Edited by P. Scott Richards & Allen E. Bergin. Washington DC: American Psychological Association.
- Hebb, Donald. 1949. *The Organization of Behavior*. New York: Wiley & Sons. <https://www.taylorfrancis.com/books/mono/10.4324/9781410612403/organization-behavior-hebb>.
- Hick, Hannes, Hans-Ferdinand Angel, Philipp Kranabitzl, and Jolana Wagner-Skacel. 2020. “Decision-Making and the Influence of the Human Factor.” In *Systems Engineering for Automotive Powertrain Development*, edited by Hannes Hick, Klaus Küpper, and Helfried Sorger, 1–26. Springer 2020. https://doi.org/10.1007/978-3-319-68847-3_14-1.
- Hihara, Sayaka, Hiroko Yamada, Atushi Iriki, and Kazuo Okanoya. 2003. “Spontaneous vocal differentiation of coo-calls for tools and food in Japanese monkeys.” *Neuroscience Research* 45: 383–89.
- Holzer, Peter. 2017. “Interoception and Gut Feelings: Unconscious Body Signals’ Impact on Brain Function, Behavior and Belief Processes.” In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 435–42. Cham: Springer.
- Holzer, Peter. 2022. “Gut Signals and Gut Feelings: Science at the Interface of Data and Beliefs.” In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fnbeh.2022.929332>.
- Iriki, Atushi, and Miki Taoka. 2012. “Triadic (ecological, neural, cognitive) niche construction: a scenario of human brain evolution extrapolating tool use and language from the control of reaching actions.” *Philosophical Transactions of the Royal Society B: Biological Sciences* 367: 10–23.
- Koutroufinis, Spyridon A. (Hg.). 2007. *Prozesse des Lebendigen. Zur Aktualität der Naturphilosophie A.N. Whiteheads*. Freiburg & München: Alber.
- Kranabitzl, Philipp, Clemens Faustmann, and Hannes Hick. 2021. “Decision Making for Sustainable Technical Applications with the SMH Approach.” *Sustainability* 13(16): 8702. <https://doi.org/10.3390/su13168702>.

- Lennon, Thomas M. 2006. "Theology and the God of the philosophers." In *The Cambridge Companion to Early Modern Philosophy*, edited by Donald Rutherford, Vol. 10, 274–308. Published online by Cambridge University Press (28 January 2007).
- Libet, Benjamin. 1985. "Unconscious cerebral initiative and the role of conscious will in voluntary action." *Behavioral Brain Science* 8 (4): 529–66. <https://doi.org/10.1017/s0140525x00044903>.
- Libet, Benjamin. 2004. *Mind Time. The Temporal Factor in Consciousness*. Cambridge MA: Harvard University Press.
- Lumbreras, Sara. 2022. "The Synergies Between Understanding Belief Formation and Artificial Intelligence." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fpsyg.2022.868903>.
- Marko, Joseph. 2017. "Reconciliation After a Protracted Violent Conflict: Do Believing Processes Play a Role, and Which One? A Research Agenda." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz. Cham: Springer.
- McFadden, Susan H. 2013. "Old Persons, Old Age, Aging, and Religion." In *Handbook of The Psychology of Religion and Spirituality*, edited by Raymond F. Paloutzian, and Crystal L. Park, 198–212. 2nd Edition. London & New York: Guilford Press.
- McNally, Richard J. 1994. *Panic Disorder: A Critical Analysis*. New York: Guilford Press.
- McNally, Richard J. 2003. *Remembering Trauma*. Cambridge, MA: Harvard University Press.
- McNally, Richard J. 2011. *What is Mental Illness?* Cambridge, MA: Harvard University Press.
- Meissner, Karin. 2017. "Believing in the Effectiveness of Treatment: From Placebo to Credition and Back." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 125–37. Cham: Springer.
- Meissner, Karin. 2022. "Placebo, nocebo: Believing in the field of medicine." *Frontiers in Pain Research* 3:972169. <https://doi.org/10.3389/fpain.2022.972169>.
- Mitropoulou, Vasiliki. 2017. "Understanding Young People's Worldview: A Practical Example of How to Work with the Model of Credition." In *Processes of*

- Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 363–74. Cham: Springer.
- Mitropoulou, Vasiliki, Dimitra Gkirlou, and Maria Meke. 2018. “Building world-views with credition teaching model in high school curricula of religious education: a controlled experimental study.” *Sociology Study* 8, no. 7: 325–35. <https://doi.org/10.17265/2159-5526/2018.07.003>.
- Murray, Michael J., Sean Greenberg, and Thomas Feeney. 2016. “Leibniz on the Problem of Evil.” In *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), edited by Edward N. Zalta. <https://plato.stanford.edu/archives/win2016/entries/leibniz-evil/>.
- Oancea, Dorin. 2017. “Soul and Body According to ‘De Fide Orthodoxa’ of St. John Damascene.” In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 319–30. Cham: Springer.
- Oviedo, Lluís. 2022. “Why does the multidisciplinary study of beliefs and believing matter so much?” In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fpsyg.2022.946953>.
- Oviedo, Lluís, and Konrad Szocik. 2020. “Religious – And Other Beliefs: How Much Specificity?” *SAGE open*, Vol. 10, (January): 1–11. <https://doi.org/10.1177/2158244019898849>.
- Oviedo, Lluís, Sara Lumbreras, and Hans-Ferdinand Angel, eds. 2022. “The Human Factor in Designing Sustainable Systems.” *Sustainability. Special issue – section: Energy Sustainability*. https://www.mdpi.com/journal/sustainability/special_issues/Human_Factor.
- Paloutzian, Raymond F., and Crystal L. Park. 2015. “Religiousness and Spirituality: The Psychology of Multilevel Meaning-Making Behavior.” *Religion, Brain & Behavior* 5, no. 2: 166–178. <https://doi.org/10.1080/2153599X.2014.891254>.
- Paloutzian, Raymond F. and Katelyn J. Mukai. 2017. “Believing, Remembering, and Imagining: The Roots and Fruits of Meanings Made and Remade.” In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 39–49. Cham: Springer.
- Paloutzian, Raymond F. and Zeynep Sagir. 2019. “Forgiving, reconciling, and peace-building in refugee contexts: Theory, research, and data from the war in Syria.” In *The Psychology of Peace Promotion*, edited by M.G.C. Njoku, L.A. Jason, and B. Johnson. Switzerland: Springer Nature.

- Paloutzian, Raymond F., Zeynep Sagir, and F. LeRon Shults. 2021. "Modeling Reconciliation and Peace Processes: Lessons from Syrian War Refugees and World War 2." In *Multi-level Reconciliation and Peacebuilding*, by Kevin P. Clements and Sung Yong Lee, 225–242. New York: Routledge.
- Pargament, Kenneth I., Melissa D. Falb, Gene G. Ano, and Amy B. Wachholtz. 2013. „The Religious Dimension of Coping: Advances in Theory, Research, and Practice.” In *Handbook of the Psychology of Religion and Spirituality*, edited by Raymond F. Paloutzian, and Crystal L. Park, 560–579. 2nd. Edition. London & New York: Guilford Press.
- Park, Crystal L. 2022. "Meaning Making Following Trauma." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fpsyg.2022.844891>.
- Reynolds, L.D., ed. 1978: *L. Annaei Senecae: Ad Lucilium Epistulae Morales*. Oxford University Press. Oxford Classical Texts.
- Richert, Rebekah A. and Granquist, Pehr. 2013. "Religious and Spiritual Development in Childhood." In *Handbook of The Psychology of Religion and Spirituality*, edited by Raymond F. Paloutzian, and Crystal L. Park, 165–212. 2nd Edition. London & New York: Guilford Press.
- Rigoni, Davide; Kühn, Simone; Sartori, Giuseppe; Brass, Marcel. 2011. "Inducing disbelief in free will alters brain correlates of preconscious motor preparation: the brain minds whether we believe in free will or not." In *Psychological Science* [May 22(5)], 613–618. [10.1177/0956797611405680](https://doi.org/10.1177/0956797611405680).
- Rosenau, Hartmut. 2002. „Theodizee. IV. Dogmatisch." In *Theologische Realenzyklopädie*, Bd. 33, 222–229. Berlin: De Gruyter.
- Rothgangel, Martin, Susanne Schwarz, Karlo Mayer, eds. 2023: Glaubensvorgänge als Creditionen gedacht? Mehrperspektivische Annäherungen in religionspädagogischer Absicht. Themenheft: *Theo-Web. Zeitschrift für Religionspädagogik* 22, H. 1. <https://doi.org/10.23770/tw0283>.
- Seitz, Rüdiger J. 2021. „Beliefs: A challenge in neuropsychological disorders." *Journal of Neuropsychology* 16, no. 1: 21–37. <https://doi.org/10.1111/jnp.12249>.
- Seitz, Rüdiger J. 2022. "Believing and Beliefs—Neurophysiological Underpinnings." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fnbeh.2022.880504>.
- Seitz, Rüdiger J. and Angel, Hans-Ferdinand. 2012. „Processes of believing – a review and conceptual account." *Review of Neuroscience* 23, no. 3: 303–09. <https://doi.org/10.1515/revneuro-2012-0034>.

- Seitz, Rüdiger J. and Angel, Hans-Ferdinand. 2020. "Belief formation – A driving force for brain evolution." In *Brain and Cognition* 140, April: 105548. <https://www.sciencedirect.com/science/article/pii/S0278262619303860>.
- Seitz, Rüdiger J., and Raymond F. Paloutzian. 2023. "Beliefs Made It into Science: Believe It or Not." *Function* 4, no. 6. <https://doi.org/10.1093/function/zqad049>.
- Seitz, Rüdiger J., Hans-Ferdinand Angel, and Raymond F. Paloutzian. 2018. "The Process of Believing and Psychiatric Symptoms." In *Religion, Brain & Behavior*. Published online: 05 Nov 2018. <https://doi.org/10.1080/2153599X.2018.1532456>.
- Seitz, Rüdiger J., Hans-Ferdinand Angel, and Raymond F. Paloutzian. 2021. "The Process of Believing, Mental Abnormalities, and Other Matters of the Mind: Where Do They Come From? What Are They Good For?" *Journal for the Cognitive Science of Religion*. <https://doi.org/10.1558/jcsr.19559>.
- Seitz, Rüdiger J., Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. 2023. "Editorial: Credition – An interdisciplinary approach to the nature of beliefs and believing." *Frontiers of Behavior Neuroscience*. May 23, 17: 1217648. <https://doi.org/10.3389/fnbeh.2023.1217648>. PMID: 37288008; PMCID: PMC10242170.
- Seitz, Rüdiger J., Raymond F. Paloutzian, Hans-Ferdinand Angel. 2018. „From Believing to Belief. A General Theoretical Model." *Journal of Cognitive Neuroscience* 30, no. 9: 1254–64. https://doi.org/10.1162/jocn_a_01292.
- Seitz, Rüdiger J., Raymond F. Paloutzian, and Hans-Ferdinand Angel. 2023. "Bridging the Gap Between believing and Memory Functions." *Europe's Journal of Psychology* 19, no. 1: 113–24. <https://doi.org/10.5964/ejop.7461>.
- Shafranske, Edward P., ed. 1996. *Religion and the Clinical Practice of Psychology*. Washington DC.
- Shank, J.B. 2022. "Voltaire." In *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), edited by Edward N. Zalta. <https://plato.stanford.edu/archives/sum2022/entries/voltaire>.
- Sugiura, Motoaki. 2022. "Adaptability, supernaturalness, and the neurocognitive basis of the self-transcendence trait: Toward an integrated framework through disaster psychology and a self-agency model." In *Credition – An Interdisciplinary Approach to the Nature of Beliefs and Believing*, by Rüdiger Seitz, Hans-Ferdinand Angel, Raymond F. Paloutzian, and Anne Taves. <https://doi.org/10.3389/fnbeh.2022.926742>.
- Schaefer, Alexandre, and Jeremy R. Gray. 2007. "A role for the human amygdala in higher cognition." *Reviews in the Neurosciences* 18, no. 5: 355–82. <https://doi.org/10.1515/REVNEURO.2007.18.5.355>.

- Schultze-Kraft, Matthias, Daniel Birman, Marco Rusconi, Carsten Allefeld, Kai Görden, Sven Dähne, Benjamin Blankertz, and John-Dylan Haynes. 2015. "The point of no return in vetoing self-initiated movements." *PNAS* 113, no. 4. <https://doi.org/10.1073/pnas.1513569112>.
- Sturn, Richard. 2017. "Approaching Another Black Box: Credition in Economics." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, Rüdiger J. Seitz, 375–86. Cham: Springer.
- Teske, John 2007/2008: "Bindings of the Will. The Neuropsychology of Subdoxastic Faith." *Studies in Science and Theology* 11: 27–43.
- Tietz, Sophie, Jolana Wagner-Skacel, Hans-Ferdinand Angel, Michaela Ratzenhofer, Frederike T. Fellendorf, Eva Fleischmann, Christof Körner, Eva Z. Reininghaus, Rüdiger J. Seitz, and Nina Dalkner. 2022. "Believing processes during the COVID-19 pandemic in individuals with bipolar disorder: An exploratory study." *World Journal of Psychiatry* 12, no. 7: 929–43. <http://dx.doi.org/10.5498/wjp.v12.i7.929>.
- Van Der Kolk, Bessel, Alexander C. McFarlane, and Lars Weisæth, eds. 1996. *Traumatic Stress: the effects of overwhelming experience on mind, body and society*. New York: Guilford Press.
- Van Der Kolk, Bessel. 2014. *The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma*. New York: Penguin Books.
- Wagner-Skacel, Jolana, Sophie Tietz, Eva Fleischmann, Frederike T. Fellendorf, Susanne A. Bengesser, Melanie Lenger, Eva Z. Reininghaus, Marco Mairinger, Christof Körner, Christoph Pieh, Seitz Rüdiger J. Hannes Hick, Hans-Ferdinand Angel, and Nina Dalkner. 2022. "Believing Processes during the COVID-19 Pandemic: A Qualitative Analysis." *International Journal of Environmental Research and Public Health*. 19, no. 19: 11997. <https://doi.org/10.3390/ijerph191911997>.
- Whitehead, Alfred North. 1978. *Process and Reality*. Corrected edition. Edited by David Ray Griffin and Donald W. Sherburne. New York: The Free Press.
- Willfort, Reinhard, and Conny Weber. 2017. "Credition in Business – Innovations with Crowdbusiness." In *Processes of Believing: The Acquisition, Maintenance, and Change in Creditions*, edited by Hans-Ferdinand Angel, Lluís Oviedo, Raymond F. Paloutzian, Anne L.C. Runehov, and Rüdiger J. Seitz, 387–95. Cham: Springer.
- Zimmermann, Friedrich, and Hans-Ferdinand Angel. 2016. „Soziale Nachhaltigkeit als Thema der Anthropologie." In *Nachhaltigkeit wofür? Von Chancen und Herausforderungen für eine nachhaltige Zukunft*, edited by Friedrich M. Zimmermann, 59–84. Berlin Heidelberg: Springer Verlag. <http://www.springer.com/de/book/9783662481905>.