



EARTH HISTORY RESEARCH CENTER

To Think Creation¹

by

Matthias Dorn²

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Abstract

After proposing a new definition of faith, its relation to knowledge will be discussed as well as its bearing on the role of science for the Creation-Evolution debate. The source of the dogmatic position of the evolutionary theory as well as the perspective of alternative theories to evolutionary theory is elaborated. If there is a fruitful development in the faith and science problem, we need to look at Scripture again with a believing heart and an open mind and we have to practise a better science and come up with better theories.

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² Dr. phil. Dr. rer. nat. Matthias Dorn, Earth History Research Centre, Southwestern Adventist University — Department of Geology, Keene, Texas, 76059, <http://origins.swau.edu>; German address: Taunusweg 15, 30657 Hanover, Germany, e-mail: dorn.m-b@arcor.de

The Problem

The faith and science problem is primarily a problem of believing and thinking. On the one hand, Christians are urged to believe in something, on the other hand, they - and we all - find us required to think about something - and that is very often the same thing that is believed.

Christians believe in a God, who has revealed himself to us, otherwise this God is a *deus absconditus*. And we use logical conclusions to investigate and to understand the reality in which we live in. Today, science is the only accepted instrument for investigating the nature of this world. But due to the fact that today's science is governed by the methodological naturalism, as soon as we begin to identify reality as being an object of divine action, nature has to be excluded from any purely human approach and will most likely be transferred at least partially to the field of e.g. faith.

Two expressions characterized this scheme: "To believe" which means to have faith and "to think" or to have knowledge. Let us proceed by discussing these notions in a more detailed manner.

The Faith and Knowledge Dichotomy

Example: When I say I know the bus will leave at 15.17h, I indicate that I know the timetable and can give precise information when to be at the bus stop to catch the bus in time. Maybe I learned the timetable by heart or I use this bus frequently; it is an expression of being sure about something and it may serve as a reliable statement to act appropriately. But, when I say I believe that the bus will leave the bus stop at a quarter past three, I indicate that I am not so sure about the departure time and one is advised to be at the bus stop well ahead of time in order not to miss the bus.

More or less vulgar expressions indicate today's problematic understanding of the two expressions: e.g. "To believe means not to know", or, "Faith begins where knowledge ends". Either we know or we believe something, as our example has demonstrated, but the two terms are mutually exclusive - at least for the (post)modern man. While knowledge and thinking are terms of primarily rational and logical character, faith and belief are insecure, unreliable, emotion-based and subjective. And all these characters are unconsciously attributed to faith but not to knowledge. We prefer knowledge and thinking to faith and belief, because it implies the absence of ambiguity.

Faith or belief, as they are predominantly used today, indicate a substantial subjective element that is not an essential part of our knowledge, but by doing so our knowledge is reduced! When we say, we know something, we indicate that we are sure that it is the way we say it. If we say, we believe, we want to indicate - at least in today's language - that we are not sure, that it is as we say. We indicate an element of uncertainty.

To show the inadequacy of this simplistic approach, I want to demonstrate its consequence: If we design faith in entire dependency to knowledge, we only leave that to be believed, we do not know. Once research continues to solve problems, we

Institute for Christian Teaching
Education Department of Seventh-day Adventists

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by

Matthias Dorn
Earth History Research Center
Southwestern Adventist University
Keene, Texas USA

694-12 Institute for Christian Teaching
12501 Old Columbia Pike
Silver Spring, MD 20904 USA

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transfer that which we believed to the area of knowledge. And if we unfortunately find out that our research was not accurate and our problem is still not solved, we can retransfer it to the realm of faith. This is so unsatisfactory that it is better to exclude faith – understood in this relation – out of our minds than to degrade it to the current and rapidly changing development of research and knowledge, reducing it below the level of research or sacrificing it to intellectual fashion.

I must admit that I have sympathy for my contemporaries that are not interested in a faith of that kind. Intellectual helplessness is unattractive. And I must admit that it is a kind of blasphemy to relate such a comprehension of faith to God, making a marionette of him due to our modern standard of research and knowledge. The "God of the gap" is definitely not the Creator God, the God of the Bible.

As a matter of fact, the dependency of faith on knowledge represents a dramatic shift in the meaning and comprehension of these terms. It has turned their former notions almost upside down.

One reason, perhaps less prominent than others, for the low esteem of the term faith in today's intellectual climate is the poor standard of conceptual precision Christians allow themselves when speaking of faith. The silent agreement with an element of inexpressibility they often share as an integral part of faith has diverted this term from our attempt for a really precise definition. The problem is not that faith implies a transcendent element or direction; it is the fact that this element is not appropriately described. But there is an approximation to a definition, and the one I shall refer to here is perhaps the one closest to scripture.

What is Faith?

It seems almost presumptuous and arrogant to ask this question in a simple headline and thereby suggest an adequate answer will be provided in a small number of paragraphs. But the use of the terms faith and belief is so variable that it is important to define as close as possible what we understand when we speak of belief. For example, when RATZSCH (2000²) uses this term in his readable book "Science and its Limits", is it obvious and self-evident that it has the same meaning as in a biblical context? Is faith always like faith? Do these expressions, used in totally different intellectual environments, still indicate the same attitude? And is it an attitude at all?

The English language has two words to describe our religious attitudes: faith and belief. The noun faith has no verb like the noun belief has, which can form the verb to believe. Without going too deep into linguistic analysis, we consider faith being an attitude that indicates a personal conviction, i. e. something elementary to our personality, something we would speak of to trust in. The term "belief" emphasizes a different, but not opposing focus. A belief is something we hold as true. It has an intellectual, philosophical, moral or religious content, which we accept and internalize. The 28 fundamentals of the SDA Church, for example, are beliefs.

Genesis (abbr. Gn) 15,1-6 reports God's encounter with Abraham. It closes in verse 6 with the statement: "Abram believed the LORD, and he credited it to him as righteousness." This is the first time the term "believe" appears in scripture and it reveals its core content. Paul explains this text in Rm 4,18-22, when he refers to the dead bodies of Abram and Sarah that could have no children together. But

Abram still believed God even though a miracle would be required. It is the divine and creative power of God that gave them their beloved son, Isaac. That is exactly what Abram believed: His and his wife's dead bodies can still come up with a child, with new life. Here, his faith is revealed! Taking this into consideration, we conclude by defining faith: "*Faith is my commitment to God's self-obligation to resurrect the dead.*" The core of faith as it is introduced by Abram's attitude towards God's assurance is inevitably linked with creation and resurrection. Both, creation and resurrection are the crown jewels in the Christian message, and they are exclusively reserved to God's almighty creative power.

Aspects of both faith and belief are integrated here. The belief, the intellectual content, is God's creative power and his commitment to resurrect the dead. And my faith is my self-devotion to this commitment. This definition is the core of all other, more explicit and differentiated approximations to the biblical understanding of faith. It may serve as a starting point or a nucleus around which all other definitions of faith must be arranged. Or, to use a visible example: it is the apex of an inverted cone.

With this definition, faith is not a religious feeling, i. e. it is not a special emotional peculiarity; it is not a personal consideration of sanctity. It is neither a personal disposition nor a subjective affair; it is an attitude that challenges the whole personality.

Let us now consider one aspect of this definition of faith that is of particular importance, its intellectual element. Faith does not begin to develop on its own; faith is always a response, an answer to the LORD's word. He is the one who triggers this development, He begins to speak, and then we begin to respond. But without an accurate comprehension, any response would be crude or corrupt. Man has to understand what the LORD says and without this comprehension, without thinking about the divine word, faith would be impossible. This intellectual element of the term faith must not be neglected. It abolishes the prejudice that faith requires a *sacrificium intellectus*; it requires thinking and knowledge as the outcome of a rational reflection.

To think, to understand, to reason, to comprehend, i.e. rationality or knowledge, are constitutive elements to encounter faith, without them faith becomes brittle and hollow, which does not comport with man's personal complexity. Therefore: Thinking is essential for faith. This is a major statement that reveals that the supposed discordance of thinking and faith cannot be supported by a closer look at what faith is. Only the one who thinks can believe – *Fides quareas intellectum!*

The other two aspects of the above definition of faith are as important as the first one, but they do not require as much discussion here. The two aspects are an emotional one and an existential one. The emotional aspect implies that faith releases us from anxious fears and it gives hope, peace and courage. The existential aspect is even more important; it occupies the central entity of man, the heart (Rm 11,9-11), leads us to obedience and enables us to perform acts of practical love.³

To use the terms faith and belief in this paper precisely, we will only speak of faith and belief in this rather rigorous sense. This is to distinguish it from other positions

³ For more details see ADOLF POHL (1995): Galater. - Wuppertaler Studienbibel.

that hold concepts that have nothing at all to do with faith. We will from now on not be permitted to say that we, for example, believe in the principle of the uniformity of nature and its laws, i. e. that they are time-invariant. Although this principle is fundamental to all natural sciences that deal with earth's, life's and universe's past, we should not say that we believe in it, but, in this case, we take it as an axiomatic presupposition. Taking something as a presuppositional starting point of research, of theory designing or in constructing a model, does not automatically imply that we have to believe in it.

In today's modern discussion, this comprehension of faith as defined above is almost unknown and it is restricted to the specialist, who is deeply involved in the subject. We should not hesitate to point this out frequently and to reiterate the core message of the term faith to avoid continual misunderstandings. It is our duty to contribute to clarity and to enhance the proper understanding of fundamental biblical terms. The better we do that, the more we will improve our position in any discussion.⁴

Faith and research

If the dichotomy of faith and knowledge is void at least from a biblical-christian approach, we should conclude that research as an application of intellectual activity should be welcomed without prejudice.

If we look at nature as created, we usually admit to being unable to investigate it, because it is a result of divine activity, and we would consider God's acts as being totally obscured to the human mind. Only nature as such is accessible to research, not nature as creation. We can only think about nature, not about creation. Is this really necessary, is there no alternative, and is it correct at all?

To better comprehend this problem, a closer view at Gn 2 can help.

The creation of Eve takes place while Adam is asleep. The reason for his sleep is not primarily to protect him from pain, but to exclude him from the possibility of observing God in his direct creative action (v. RAD 1981¹¹,59). God hid this moment of creation and did not allow Adam – even before evil entered this world – to witness his creative power. So it cannot be the intervention of sin that led God to decide to hide this part of creation. The message of the text is clear. God does not want us to possess this knowledge, how he created life. No explanation is offered as to why God did it this way.

A closer look at Gn 2 reveals that the creation of Eve is the last event of the whole creation. Is it undisclosed because it is an element of life that God created – or did he not want Adam to witness any of his creative acts at all?

This is not the only biblical report of God hiding His ways of working: Before destroying Sodom and Gomorra (Gn 19,1-29), God commands Lot and his wife not to turn back after they have left the city. God did not allow them to share with Him the knowledge of the means of destruction. Lot's wife is immediately killed after she looked back (Gn 19,26). One can see how important it is for God to keep his creative power hidden. The two cities are not found to this day.

⁴ For a further discussion of the term faith see the article of GASPAR F. COLÓN in this volume.

In the New Testament, the same message can be read: Christ's resurrection happens without a witness. The angel sat next to the empty grave and told the women what had happened. Paul himself referred to the same theological point, when he writes (1. Cor. 15,3a): "For what I received I passed on to you as of first importance: that Christ died for our sins according to the Scriptures, ⁴that he was buried, that he was raised on the third day according to the Scriptures, ...". It is "... according to the Scriptures", i.e. he can only refer to it as a matter of revelation, not as a document of witness.

In the parable of the "Growing Seed" (Mk 4,26-29) Christ himself described this attitude of God:

26 He also said "This is what the kingdom of God is like. A man scatters seed on the ground.

27 Night and day, whether he sleeps or gets up, the seed sprouts and grows, though he does not know how.

28 All by itself the soil produces grain — first the stalk, then the head, then the full kernel in the head.

29 As soon as the grain is ripe, he puts the sickle to it, because the harvest has come."

We cannot discuss all the aspects of that parable here. The important phrase is the beginning of v. 28: "All by itself...". Does the earth bring up the fruit on its own? Is it not God Who made the soil to do exactly that? Certainly, the physical-chemical process is governed by natural laws, but it is God, who stands behind it, who enabled the soil to be fruitful, and who blessed the work of the man who scattered the seed. By the way, should he not be the first to know how the seed grows? Yes, he does! But what he does not know is how it grows. It looks like it grows "all by itself", but it is God who ultimately makes it possible.

This prime parable, probably one of the most important in the New Testament, speaks of this *deus absconditus*, that hidden God – but it does not speak of a God Who is distant from his world, that shows no interest in it. It is exactly the opposite: The *deus absconditus* is a God deeply involved in the world, in its very nature, although it is undisclosed to us how this proximity is substantiated.

However, the consequence of this continuous message is that knowledge, both theoretical and experimental, about God's creative acts, is not accessible. God has prevented it.⁵

A Bible-based believing Christian can accept this; he can still admire creation and praise the Creator for his Wisdom in creation. But, and this is important, based on the Bible, an investigative approach to the origin of creation seems to be beyond our reach. In other words: Without marginalizing the biblical record, the attempt to investigate creation seems to be in vain. In a somewhat oversimplified way one could say that the Bible disallows any kind of research of the world's origin. So, the only way to assimilate the doctrine of creation is to do it by faith. We can believe in creation, but we cannot investigate it, do research on it, or demonstrate it.

⁵ Even God's enemy, the Satan, a former angel, does not know it. He has no creative power, he cannot design life.

Now, the dichotomy of faith and knowledge described above seems to be correct, even inevitable, and research is not applicable to understanding God's creative action. So, the biblical approach to solving the faith and knowledge problem is not as uniform as expected: Although faith requires thinking and knowledge, research itself seems to be in a weaker position. We have to accept this ambiguity for the moment and try to evaluate further topics to elaborate the relation of faith and research.

Is Naturalism an adequate solution?

Taking this into account is it not appropriate to exclude any supernatural intervention" (SNI)? The concept of naturalism does it and almost all secular scientists take it as their presupposition and many believing scientist accept at least some sort of methodological naturalism.

The term Naturalism is not as well defined as one might think at first (GOEBEL ET AL. 2004). The outstanding successes of the natural sciences and its application in the realm of technology have produced a high esteem and given authority to these sciences. The Neurosciences especially have come up with remarkable results that allow questions about the character of human thinking and decision making.

The philosophical starting point of naturalism is that anything that is, is a part of nature. But what nature means in this context, is not defined. Therefore, three different types of naturalism can be distinguished: an ontological one, which takes Physics as its leading science and ends up in a *Physicalism*. The second one is a natural-historical one, its leading sciences are the evolution- and sociobiology and ends up in a *Biologism*. The third one is the methodological one. This methodological naturalism, that is popular even among Christian scientists, goes so far as to *reduce nature* to that what the *natural* sciences can achieve and it ends up in a *Scientism*. We must comprehend the U-turn of methodological naturalism in thinking about the relation between nature and science. It usually is accepted that nature is an entity that could be explored with the methods and tools of the sciences. Thus, methodological naturalism claims that nature is only that which the sciences can perceive, i.e. a "nature" beyond the natural sciences is void.

It is this presupposition that makes methodological naturalism so strong: It is an entirely anthropomorphic understanding of nature and allows even an anthropocentric approach to it. It is not nature, but the science of nature that is in the center of the encounter with nature.

With this presupposition, any supernatural is automatically excluded: No transcendent God, that could manipulate or even suspend the natural laws, no angels, no ghost or spiritualities, no Santa Claus, no Cartesian Psychosubstances or any second nonmaterial world, no platonic realm of ideas exists. Or, in philosophical terms, there exists no objective immateriality. As SELLARS (1963,173) has put it: "In the dimension of describing and explaining the world, science is the measure of all things". So, methodological naturalism appears as a *Monism*.⁶

⁶ It is worth noting that our society, which describes itself as pluralistic and considers that to be a great achievement, only allows science to be understood and pursued by one single –

This *Monism* fails to perceive nature as a whole. Löw (1986,82f) gives two good examples. A dog can only be seen as *res extensa*, originated from matter and complex rules of phylogenetically well-determined chemical components. But subjectivity, emotionality and sensibility neither appear nor belong to the *paradigm*. A freshly fertilized human ovum is chemically not too different from that of a hamster. So it is the physician or the scientist (himself at his beginning a fertilized ovum) who has to recognize it as a human being. This means that the natural sciences cannot identify that what we call the *Wesen*, essence, entity or the temper of a being. Whatever the natural science may look like: they will be inadequate to perceive the essence – a great and crucial deficit.

Therefore, a science encompassed in that materialistic presupposition, cannot allow any SNI. But it cannot allow it because the empirically derived data assume it; it cannot allow it, simply due to its presupposition. But, can these suppositions stand a critical challenge? There are three major problems associated with methodological naturalism:

The first problem is the assignment of rationality only to the natural sciences – but what are the natural sciences? They are not one pure assemblage of objective tools or methods, they vary widely. They can be primarily quantitative, like physics, make wide use of teleological explanation, like in biology, have historical elements like geology and can be mainly descriptive as geography. There is no such consistent thing called natural sciences – as a matter of fact, the natural sciences appear to be fully pluralistic, and hence not a good source for a monistic-colored presupposition.

The second problem is the so called performative contradiction that is unavoidably linked to the presupposition of methodological naturalism: This monistic presupposition itself is not an empirical or a natural scientific one, it is a typical philosophical one. It is not the result of empirical research – it is not the product of a natural scientific process – and therefore it contradicts its own presupposition.

The third problem is how the appeal of the natural sciences to be the only way to knowledge can be justified. Is it their objectivity? Is it the means and tools by which they come up with their results? Eventually it is the empirical element, and therefore perception that serves as the foundation of science – but that is clearly a matter of epistemology. It is not at all evident, as e. g. RATZSCH (2000²,24-27) has outlined, that empiricism is sufficient for perceiving and understanding data. The whole problem of the theory of science is involved here. I will leave it with this and further discussion to the special literature of the theory of science.

The consequences are that the methodological naturalism is a highly problematic concept and can only be sustained by ignoring fundamental aspects of nature and science.

mono- methodology. This dichotomy appears somehow not incidentally, but reveals the ideological infiltration that our society has accepted to collect its own fundamentals.

The Problem of Supernatural Intervention

The consequence now might be that the doors for the integration of the SNI look wide open. Moreover: If the mechanism of God's creative power is entirely undisclosed to the human mind, as we have seen above, how should we then deal with SNI?

BRAND & JARNES (2006,23f) list three presuppositions for the modern understanding of science:

1. Nature operates through the action of natural laws
2. Living and nonliving things can be understood and investigated by experiments
3. Nature as a whole is not static

Although these three points are not sufficient for the comprehension of science, they mark milestones in their development and ensure its great success. There will probably be no knowledgeable scientist that will not accept these presuppositions.

There is a fourth presupposition that very often goes with these three, but that is not often explicitly mentioned:

4. Any kind of supernatural intervention is totally excluded.

Taking these four presuppositions as they appear, we are close to the naturalism as discussed above. This exclusion of SNI is constitutive for methodological naturalism. So, would acceptance of SNI balance the deficits of naturalism and is SNI the right alternative for Christian scientists at all? Is it that which is necessary to develop an alternative theory to the evolutionary theory that is in harmony with the Bible?

First of all, the term SNI needs a closer look. In itself, supernatural means "above" or "over" nature and implies something that is not under control of any possible natural process. It is not unnatural in the sense of perverted, ill or bad, it is simply beyond the realm of nature. Manifestations of SNI are often regarded as miracles (see YOUNG 2000). They are singularities and their appearance is not explainable by any natural law or mechanism. Who or what caused the miracle or is the source of something like a SNI is unimportant for this moment.

There is a risk of misusing or even abusing the term SNI. Its unexplainability with natural causes may lead to the conclusion that a phenomenon or a problem, that is unexplainable up to now and most likely will be always unexplainable, is connected to a SNI. But that is not a valid conclusion. The great success of science is that it has repeatedly found explanations to questions that were asked for ages. Science has come up with correct solutions to age-old problems, thereby demonstrating that they were not a product of a SNI but could be explained by natural causes. In other words: Not to know something or not to be able to explain something is a very bad reason to call for a SNI. In terms of a biblical approach to SNI you will usually end up with a God of the gap. That is unsatisfactory and is degrading to God, an entirely unacceptable result.⁷

⁷ BRAND (1997,59ff) avoids the misunderstanding by saying that a SNI – for Brand its source is the Christian God, may result from application of natural laws that are not yet known.

This point can be applied to the question of whether a topic can be investigated scientifically. How do you prove, theoretically or experimentally, that a natural phenomenon is not explainable by any known natural law or concept of nature? How could one, by scientific means, exclude something from the possibility of being explained by science? Can we, by research, eventually come to the conclusion that something is not researchable? We cannot!

The implications of this conclusion are evident: The call for a role of SNI in nature in way whatsoever can never have its source in science itself, it has to originate from somewhere else. Whatever the subject of our research may be, as long as we are willing to use scientific methods we assume that it is researchable and thus a SNI is not required. In fact, SNI is methodologically excluded, but it is not purposely excluded as an outcome of divine activity. A SNI cannot be considered being a part of any scientific method or under any current definition of science.

Another consequence is that by the means of science itself no boundary of research can be defined. Such a limit of science would imply the ability to define the unresearchable. All we can do is to witness the development of scientific knowledge and see, whether it will solve problems we think are unsolvable – due to a SNI.

Any scientific theory that wants to be an alternative theory to the evolutionary theory must consider this. Its qualification as a theory or as an alternative theory is not based on its openness to include a SNI in any what whatsoever way, but it is just the opposite: It is not the appeal to a SNI that guarantee the probable success of such an alternative theory, but its restriction to the rules of science!

Another important remark referring to the term SNI is the following: Especially for the believing Christian, who accepts the above definition, supernatural is not something indefinable. It is something real, something acting in reality. It is God, the creator, the subject of Gn 1, the father of Jesus Christ, our Redeemer. Supernatural may be a synonym for divinity, deity, a ghost or a goddess. Or one considers supernatural as a neutral term for a transcendent being or entity that is not comprehended automatically as a religious or holy being. For a Christian, the cause of the supernatural is always God, the Creator. The more neutral formulation of supernatural only obscures the true intention of what it really means.

That is very important to identify, because otherwise it will be difficult to address the source of the SNI correctly, and not to attribute it to some other, obscure or even occult sources.⁸

As a result of this short discussion, one can say that the SNI-issue is not the key-factor in the faith and science question. The innermost conviction of a believing Christian that God created the earth and life on it will most likely not be transferred optimally into the process of science in the form of the SNI.

But SNI's did not only occur in the form of miracles, as they were reported throughout the Bible and as Christ has done them. There is another order of SNI, as the Genesis account presents them: Creation and the Flood, and the changes of

So that, what is not explainable at the moment and may be considered as an outcome of a SNI, will be explainable as research and science will continue.

⁸ Whether God's enemy, the Satan, may be a cause of SNI, is to be undiscussed here.

nature after the fall. Here, the question of SNI comes under the overall problem of origins. And then the debate about the SNI and its relation to science will be repeated under the special focus of the question of origins. Before dealing with that, another problem has to be considered.

For a clarification of the terminology, I shall use the expression creation only for what is reported in Gn 1 & Gn 2, but when I speak about the origin of the world and its life, I will refer to Gn 1 – Gn 11, i.e. the whole primeval history.

The Uniformity of Nature

One of the reasons-SNI is so popular among creation-based Christian scientists, is its power to explain something that natural laws cannot explain. And if a SNI has taken place, the uniformity of nature is suspended. And the argument even goes the other way around: Who can prove that nature always was like it is today? And if nature was not like it is today, how was it before the discontinuity and what caused it? These questions are especially crucial for all discussions on origins.

The uniformity of nature is not, as RATZSCH (2000,14) says, something to believe in, it is a presupposition of axiomatic character. It is absolutely necessary to perform science. If this presupposition does not apply, no experiment could be designed and no sustainable theory would be available. Any set of theories about nature would be impossible.

The necessity of this presupposition is so important that it is almost never really discussed or outlined. It occupies a more prominent role in discussing matters of origins. Certainly, no one can guarantee that nature was the same all the time of earth's history. Although the geological column reveals many sediments and rocks which origins are not easily explained, no one would come up with the idea that nature in the past was somehow different to nature today. And if it were different – how would it be explainable in words, ideas or in a terminology that has to include items beyond its own meanings?

Even geological environments that are not known to us today will not imply any kind of redesign of nature just for the sake of explaining an item, in this special case the origin of a sediment or rock, whose origin is unexplainable with the current level of knowledge. This will apply to all sciences in more or less the same way.

Natural laws are nothing natural, their claim for universality cannot be proved by natural observation. Instead: natural observation requires the axiom that all natural laws are time-invariant. If this were not the case any research of the history of the earth would be impossible for those colleagues that are evolutionists and for those that are non-evolutionists. If we apply the argument of a time variance of natural laws we exclude history from our research, and that destroys the foundation to build any alternative theory at all.

I would go so far as to say that the burden of proof is on the other side of the problem: Whoever states that nature is not uniform should deliver a proof of it. The normal perception of nature is that it is uniform, not capricious. So the variability of nature has to be confirmed, not its uniformity.

A second attempt: The Relation of Faith and Knowledge

Now, to approach the problem from a rather pragmatic point of view: Who really wishes for any kind of limitation of research, and especially a Bible-based limitation, especially in a society that considers it a sign of a success to have overcome its Christian roots? And even in a Christian environment, one has to deal with another dichotomy: By faith, one might choose to avoid research of origins. But how can one then assert that research is appropriate for the present state of nature but inappropriate for the history of nature? There is only one nature, one creation, only one world in which we live, and that we see and investigate.

All who are involved in research are aware that there is no alternative to good science. All the practical and theoretical tools being used are essential – and almost all natural sciences have at least a historical segment; without it they would be incomplete. This applies especially to astronomy, geology and palaeontology and it applies as well to biology and anthropology.

So, if knowledge and faith must not be disconnected, how are they related and why is it so difficult to harmonize them, especially when considering scientific questions. Faith, if it were separated from its intellectual element, would lose its solid foundation to be a reliable basis for understanding the beginning of the world. Believing in creation must include thinking about it; perhaps it must even be preceded by such thinking. One cannot believe in creation without having thought about it, without developing knowledge about it.

Therefore, faith and knowledge are not antagonistic positions and one is not to be dominated by the other; faith integrates knowledge as one of its fundamentals, it exceeds the boundaries of knowledge, but never rejects it.

Today, several problems and misunderstandings are inevitably linked to the relation of faith and knowledge. The first one is the so called *dualism*, many people have quietly accommodated with. According to dualism, Faith and knowledge are from separate worlds. One is directed to reality, an economical, a rational or a physical reality, the other world is the sacred or simply the spiritual one, where faith can exist. But this dualism cannot stand. It is one world we live in and experience, and it is one mind and one brain we think with. The concept of dualism disrespects the world's and our own reality. We do not live in separate entities, but in one, we are one entity in one world. Considering creation, the dualist may come up with statements like "The Bible tells us that the LORD created the world, but evolution tells us, how he did it". Dualism is not a safe intellectual haven for someone who is not interested in a discussion, it is a poor compromise that does not contribute anything substantial to our problem.

Another misconception is that faith aims at something beyond this world, but knowledge and rationality, and even scientific thinking, find their sphere and solutions inside it. This again is the result of another kind of *dualism* that unconsciously influences the relation of faith and rationality. It splits the world into a real part and one that lies "beyond" it. All the arguments against the dualism outlined above apply to this one as well. The definition of faith and its consequences include reality in its entire complexity. A faith that is distracted from reality may have a transcendent flavor – and neither challenges nor demands a practical outcome – but it cannot be a reliable foundation for life. Faith must prove its value in life, and what faith makes

out of one's life characterizes it probably more than anything else. Again, faith must include and integrate all parts of reality. It may, or even must transcend it as well, but not deny or neglect it.

And this has vital consequences for our intellectual habitus. From this point of view, faith and thinking, faith and rationality are not contradictory.

The arguments up to now were to show that faith itself does not abolish thinking. The other direction is also important. Is thinking or rationality something that makes faith superfluous? This question is not trivial, it points to some crucial statements.

In a society that regards it as a success that it has overcome its Christian roots and stands on its own foundation, whatever that may be, the question about faith and thinking sounds strange. Today's *Weltanschauung* emphasizes rationality and all its derivatives⁹ to such an extent that something like faith is either entirely restricted to the private area¹⁰ or it is certainly nothing that can contribute in an essential way to promote the growth of knowledge or the comprehension of reality. Faith may be an enhancement of rationality but not in the way that it makes rationality look incomplete. Rationality is disinterested in faith, because whatever faith represents, it would only be an addition to rationality that will neither improve nor weaken it. Faith and Christian attitudes are without constitutive importance for today's intellectual climate. Our societies are highly secular.

Again, overcoming misunderstandings is the first task. The dependence of faith on - or independence of faith from - thinking as criticized above is important for the rational part of our mind as well. The arguments against dualism are not only appropriate for faith, but for rationality as well. Any dichotomizing of the world or of our minds cannot comport with the reality we live in and how we perceive it. A holistic approach to the world is normal and appropriate for man, not a split or dualistic approach.

There is an historic event that occurred at the beginning of this hiatus of faith and knowledge, the trial against the Florentine "first mathematician and philosopher" Galileo Galilei. This trial was the starting shot of the divergent development of faith and thinking, of theology and science, of the church and the scientific community.¹¹ For the purpose of this paper it is sufficient to say that the trial and the condemnation of Galileo initiated the process of secularization of science.

This de-coupling of faith and science, of faith and knowledge, of faith and thinking led to a slow migration of relevance and truth of the two aspects. Before the beginning of the scientific revolution and the Enlightenment, faith was dominant; thereafter, faith was reduced more and more to the margin of the field of knowledge. The reason is easy to understand: New questions arose, but questions requiring answers based on faith were difficult, and often even impossible to obtain. In addi-

⁹ That is at least the self-image it wants to provide of itself. But there are severe objections to that self estimation, but they lie beyond the scope of this paper.

¹⁰ This is mainly true for the European countries and here especially for France or Germany.

¹¹ Although it is interesting to look at the trial and its circumstances in detail, this cannot be done here.

tion, scientific questions could not be answered by a theological discourse;¹² they could only be answered by science, and this problem-solving attitude gave it the intellectual authority it has today. Discovering (I avoid the verb to create) scientific knowledge is the task of science – and not the task of faith¹³.

This situation is the current one we have to face as Christians today. It is problematic for Christians, but not for the vast majority of our contemporaries. If faith cannot provide the answers we seek, how do we respond when scientific answers contradict our beliefs, our convictions? It is easy to conclude that faith slowly achieves a defensive position in the science and faith problem.

This defensive – often apologetic – position led to a strategy that could not have been worse to overcome the tensions described above. What happens with such a defense? The beliefs we as Christians have are, as outlined above, not disconnected from reality, and these beliefs must refer to reality in a way that faith is enabled and not disabled. It then would be evident that perception of reality and Christian beliefs comply with each other. If they do not, which gains the primacy? Since the conflict began, Christians have argued against science from the position of their beliefs. In the field of origins the evolutionistic approach was supported by science and denied beliefs and faith.

The defense against evolution – and the beginning of an irreversible misunderstanding, started immediately. The defensive opposition to a potentially scientific development of a new understanding of earth's and life's origin led to a dichotomization of the positions; and not only to a dichotomization, one position maneuvered itself into the area of meaninglessness. For the ongoing research, whatever the Christian opposition came up with against the evolutionary theory was simply irrelevant. Certainly, there were and are a lot of problems the evolutionary theory has to deal with, but pure opposition was not the right way to deal with them.

It is no secret that these problems of the evolutionary theory were and are vast and the insiders of the scientific community know them well. But arguments based on christian theology were excluded from the scientific arena and the scientific process, even if established and presented on the highest level. The worst example of such defensive argumentation was what BRAND (1997) called "to poke holes into someone else's theories". Very often the results of classical scientific work were used against the common scientific interpretation. The end was an escape in anti-evolutionism and a position of anti-research.

Overall, science and truth must not be disassociated. It is science's privilege to search for truth, but we know as well that it has to be done with humility, as BOSKOVIC (2007,22) has said. Separating science from truth will end either in positivism, materialism or an empty instrumentalism. If science and truth are linked to each other, science can serve as a wonderful tool to achieve more and more reliable knowledge about the world. The greatest danger is that this may be abused to de-

¹² This is the core argument of Galileo. He turned to science not because he was uninterested or even perhaps against faith, he turned to science because faith (and the bible) did not provide the answers he (re)searched for.

¹³ I hold this statement for true even as a deeply believing Christian and a devoted Seventh-Day Adventist.

sign an untouchable dogma for egoistic or economic purposes. Kept in its appropriate application and circumstances and understood in this environment, science can develop its full power and rigor.

The Dogmatic Character of Evolutionism

Anti-Evolutionism focused mainly on demonstrating the weakness of the evolutionary theory. Let us briefly imagine the following situation: Research has come up with the extraordinary result that the age of the world is not as great as it had been seen until then. Furthermore, suppose that geology found out that it was not a long succession of very slow processes that formed the earth but a giant catastrophe. That would be nice, wouldn't it? Certainly, such a view, having persuasive plausibility as well as coherency with the primeval history as given in Gn 1 – 11, would be charming and would invite thinking about the authority of the Bible. But the trap is obvious: The - official - goal of evolutionism is to develop an intrinsic concept of the origin of the earth based on science and only on science, it will never have any relation to God, a creator or the primeval history. No SNI is allowed or needed, whatever the substantiation of such a radically revised scientific concept would look like. Whatever the evolutionary mechanisms would be like in such a new "one-catastrophe-young-earth-theory", they would serve in the same manner as the known mechanisms serve today in the evolutionary theory.

The problem with this is that there is actually no such alternative concept in the area of evolutionary thinking, there is no such diversity in the discussion of evolutionary concepts. What exists today is a dogmatic stronghold of evolutionism and evolutionary theory in a way no other theory has obtained.

This dogmatism of evolutionism can be described as follows: That there has been an evolution in a billion years of earth history is a fact, but how it has happened is a matter of improving scientific research and ongoing theoretical debates. In other words: A theory about the origin of the world, that is not evolutionistic, is no scientific theory, by definition. A dispute between theories is only allowed within the scope of evolution resp. evolutionism, not beyond it or contrary to it. This is precisely the point where the openness and freedom of research becomes important. It is a misunderstanding on all sides who argue about evolution that they do not recognize the way a legitimate argumentation should precede. Good and free science is absolute necessary – this is undisputable! But those who are evolutionists will consider a dispute or even a contradiction to evolutionary theory as an attack on science in general, although it aims at a dogma – I avoid the term paradigm purposely – and not at a theory.

Good science is the best ally for all scientists in favor of creation to keep a trustworthy and respected position in the scientific community. It means that we do neither need nor create a so called "creation science" or an alternative science; it means that we use science as all others scientists do and do not discredit its rules. The only chance to win ground is the development of alternative theories, of scientifically accurate concepts.

But what is to be rejected is the application of science to promote a scientific dogma about the origin of the world – an evolutionistic one as well as an alternative

one. If evolutionism is considered as a dogma, it is correct to consider creationism as a dogma as well. All these "-isms" do not help.

The development of an alternative theory to evolutionary theory does not automatically suggest that we suddenly achieve truth. In the realm of science, the results of developing theories that are complementary to the primeval history do not at all mean that we produce true theories. All the problems of theories, of creative and unprejudiced thinking, of background knowledge will be the same for the alternative theory as they are for the evolutionary theory. We will end up in the same situation of competing and diverse theories about the origin of the earth as there are competing and diverse theories in evolution.

Seen from a historical or philosophical point, the concepts differ in one major aspect: Darwin and his followers strenuously deny teleology. There is no aim in evolution, and therefore man is not and must not be the aim of evolution as well, and the evolutionary process does not come up with something like sense or purpose. But teleological explanations are vital and unavoidable in the field of biology and in the humanities, and to exclude teleology from those sciences would actually mean to destroy them.

Another concept absent from evolutionary thinking is "beauty". What evolutionary thinking comes up with is a species that survives because it is fitter than others, i.e. it is better adapted. All the beauty in nature is no beauty because it is entirely functionalized to win advantages in the evolutionary process. The care of the parents for their progeny has nothing to do with the possibility that the mother cat cares dearly for her kitten, it is only to promote a better rate of reproduction for them.

All the elements we see in nature have to be suspended or strictly reduced to their functions as mechanisms to improve the evolutionary process. But the idea of sense, purpose, beauty or even love is philosophical nonsense, at least, if evolution is considered as corresponding with reality. Evolution must not need them and does not need them, but man's life would without joy and only little better than a vegetative state without them. Even without being a Christian or at least someone who considers a transcendent power as the source of the universe and the world, these obstacles cannot be overcome.

To enhance these ideas, keep in mind that research and its technical language is not the only intellectual approach to nature. We can speak in poetry about it; we sing about it, as we do in our worships with greatest joy. Paintings, like those of the impressionists, open even more and different views on nature. There are many different ways to approach nature, and the one research and its language has chosen is not the only legitimate one. For example, the language of admiration is another aspect. The language of the Bible about nature is one of admiration that wants to initiate praise and worship of the Creator.

Redemption and Creation

There is one further question to be answered, before turning to discuss the structure and possibility of alternative theories to the evolutionary theory: What role would such an alternative theory play in the totality of our faith? We outlined already the perspective of a potential theory that we called "one-catastrophe-young-earth-theory". Such a theory would be immediately integrated into an alternative

evolutionary concept – and it would by no means overcome or suspend evolutionism as a concept.

An alternative theory would not and must not function as a rescue or a safe haven for faith. Faith must be founded on God's promise to resurrect from the dead. It is God Himself, who is the guarantee of faith. Whether or not we have or will have in the future an alternative theory to the evolutionary theory is unimportant, as it will not affect our faith, but it is certainly a huge deficit not to have one. If we would produce a scientific theory to understand more about the origin of the earth and life on it, we would like to have one that will not contradict our faith fundamentally. That wish for consistency is quite comprehensible. Therefore, the search for a theory of the origin of the world that is coherent with our faith is natural and supportable.

Nevertheless, there is a special place for such an alternative theory that has to be outlined.

It starts with the self-presentation of God in the first commandment (Ex 20,2f):

2 I am the LORD your God, who brought you out of Egypt, out of the land of slavery.

3 You shall have no other gods before me

Notice, that God presents himself firstly, "I am the LORD your God, ..." before he goes on with the other commandments. They start with "You must...". And how does God introduce himself? As a liberator and redeemer! He led the people of Israel out of Egypt and slavery. In other words: God gave freedom first, then He gave the law. God gives first before He demands! What God does not mention in His self-introduction is His creation. Actually the first commandment should read as follows: "I am the LORD your God, who has created heaven and earth, ...". But God gives the reason to be adored as the only God not by His creation but by His redeeming action. Therefore: Salvation is the core of the divine action (see also Jes 40,21). This preference is not only due to the historical or temporal proximity of the rescue in the Red Sea, it is a fundamental preference with overwhelming importance. The prime character of God is that He is a redeeming God, and then comes anything else! So God first gives something to us and after that He requests something from us.

In other words: Because God is a Redeemer (i.e. can resurrect the dead), he can be a Creator. The perception of God as a redeemer precedes always the perception of God as a creator, never vice versa. It is God Himself, who has affirmed it in this order. This priority of redemption emphasizes the position that Christ holds in this affair: He is the Savior who guarantees our redemption.

In a more romanticized language, one can say: You can look from Calvary to the Garden in Eden, but you cannot look from the Garden in Eden to the cross.

This is in harmony with the fact that the plan of redemption was fixed before creation, as the following selected texts will reveal. Jn 17,24: "... thou lovedst me before the foundation of the world", Eph 1,4: "... he hath chosen us in him before the foundation of the world" and 1 Ptr 1,20: "Who verily was foreordained before the foundation of the world".

And there are other relations between redemption and creation. A very popular concept about the origin of earth and life on it is the so called "theistic evolution". It tries to amalgamate the God of creation with the concept of evolution, a dualism or a compromise already mentioned above. Theologically speaking, God has not finished his creation, and so the world is still in the process of a *creatio continua* or *creatio progressiva*. Many Christians, even Bible-based believing Christians have adopted such a view.

Whether or not one accepts this approach, several problems have to be solved. One of them is the origin of evil. If the world we live in today is not yet finished, if God did not come to an end¹⁴ of His creative act, the evil we see everywhere is a lack of God's ability to create perfectly. The evil is therefore not an outcome or the consequence of human behavior but of the reduced creative power of God, and so God Himself is responsible for the evil, not man.¹⁵ And that means that Christ, God's own Son, did not die on behalf of man and his sin, but God dared to sacrifice His own Son to compensate His deficits during his ongoing creation. This would turn the event of Calvary upside down and simply dismisses any theistic evolution or other progressive creational concepts.

Furthermore, a perspective of the integration of creation and evolution reveals another antagonism: The Bible tells of a second coming of Christ, the *Parousia*. This concluding act will take this world to a definite end. With the *Parousia*, the resurrection of God's children will take place. Resurrection is not an allegorical or otherwise symbolic term, it wants to be understood as a physical process that will reintroduce all the dead children of God to life that from then on will be eternal.

Resurrection can only be accomplished by the creative power of God Himself. It is only His creative power that guarantees us that we will rise from the dead. Many Christians who have adopted the theistic evolution still keep this as the center of their faith. But why is God's creative power acceptable in the future and not believable in the past? How can one honestly apply God as a re-creator and somehow deny Him being the first creator as the Bible says it? It is an unsolvable contradiction. Who ever believes in his own physical reaction should not hesitate to believe in a creation as the Bible says it. If the biblical report about Christ's resurrection is correct and if the biblical perspective of a *Parousia* and the resurrection is correct, why then should its report of creation be incorrect?

This bears several important consequences for our problem. The discussion about whether or not God created the world must be embedded in a discussion, or better a confession, that our God is a Redeemer, or more precise: our Redeemer. Otherwise we will only end up in the pros and cons of the scientific arguments, but we will never bring the ones we talk with to recognize Christ as their savior.

That is the reason a believing Christian would be very much interested in a "one-catastrophe-young-earth-theory", not for the sake of the argument, but because it

¹⁴ Despite the statement of Gn 2,2 the He has completed His work of creation.

¹⁵ This argument that God is responsible for evil and not man is not new and not linked to appearance of evolution. It is already a part of Adam's accusation to God, that the woman, God gave him, gave him the fruit, and by that pleading God the true source of evil (Gn 3,12).

will fit into the overall conception of what God has done and will do for this world and for every one of us.

The necessity for an alternative theory to the evolutionary theory exists only for those who have accepted Christ's redemption for themselves and now belong to God's people. He who truly applies the physical resurrection of one's own body to himself will gladly accept the message of creation. Who is not of this opinion will find it unnecessary to search for such an alternative theory. He can live with whatever it may be, as long as it is in harmony with the current standard of science.

The Alternative Theory

Therefore: The reconciliation of faith and knowledge must proceed in a totally different way. The first step is that we not only admit that there is a need for reconciliation, we are willing to work for it. Those of our contemporaries who ignore this will not understand the source of our motivation, and will classify it as a result of religious dogmatism and radicalism. Nevertheless, we still have a good argument for reconciliation: *We accept the rules of good science.*

Good science is the only way to develop good alternative theories. There are already several alternative theories regarding special aspects of the history of the world, there is in general an explanatory deficit on the alternative side. This deficit is probably the greatest hurdle in the discussion about creation or evolution. How can it be overcome? How are substantial alternative theories to be developed?

One method is the *Informed Interventionism*, as it has been proposed by BRAND (1997,90-94) in his book *Faith, Reason and Earth History*. The *Informed Interventionism* allows the SNI in a specific way. It does not mean that the natural laws are suspended, it means that God may trigger these laws, to initiate something, but that will then continue by natural law. It is not primarily the intention of the *Informed Interventionism* to allow a SNI and thereby suspend the natural laws. For further details, see BRAND as quoted above.

This concept I am proposing is called the development of *complementary theories*. A *complementary theory* is a purely scientific theory that describes aspects of the earth's history in a way that is consistent with the primeval history of Gn 1-11. *Complementary theories* take the primeval history as a motivation or as an initiation to generate alternative theories, but they avoid using Scripture as a theoretical basis. A more detailed description of this concept of complementarity will follow soon will be published later.

Both concepts, the *Informed Interventionism* as well as *complementary theories* do not allow an interference of theological ideas with science, they provoke a development of ideas independent of the dogma of evolutionism, but according to the rules of science.

These rules of science will not prefer any theory, we will have to accept that there will always be competing theories, even among those that are alternative to the evolutionistic ones. We must avoid the misunderstanding that simply choosing a standpoint congruent with the Bible's view of earth's history will miraculously solve all problems of research. This is unscientific and unrealistic. The general problems

of scientific theories will be the same for all theories, the evolutionistic ones as well as for alternative ones.

The consequence is: Scientific progress, and not suppression of unpleasant theories, is the best answer to dogmatic or poor science. Some implications of this view include the following

- The best answer to scientific problems is better science
- Better the right question than a quick, but inadequate answer
- No need for fear of problems
- No need to answer all questions at once; better few answers that are right
- Better to live with contradictions than with a dishonest security

We do not need another science, *we need better science*. Faith must not thwart, impede or even avert research. We must not replace science by any other thing – not even by the Bible or any other so called “holy scripture” and vice versa. It is urgent to start “to think creation” and not only to believe it.

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