

Gen 1,28: God blessed them and said to them, “Be fruitful and increase in number; fill the earth and subdue it.

Faith in the life of a scientist

Introductory remarks

My talk will not be anything of the following:

- ✗ a lecture on the fight between evolutionists and creationists
- ✗ an attempt of scientific proof of the existence of GOD or scientific explanation of first chapters of the Bible

My talk will contain:

- ☑ my personal testimony
- ☑ a few comments on the topic *"what is faith"* and *"what is science"*
- ☑ how I see roles of faith and science

Basic statement: I do believe in the omnipotent GOD as the Creator but, even as a scientist, I do not care how He did it; for me – my salvation – it is unimportant

My story of a Christian

- ☑ I was born into a family of active Christians; I never had problems with belief that God exists – but it was rather the „inherited faith“ of the „Old Testament type“ = to live according to the Bible requirements;
- ☑ I was unhappy that I do not cope with it well, unable to live up to the right standards; when I was around 17 I finally realized that it will not work without accepting God's grace through personal surrender to Christ; I then received redemption and won the inner peace which accompanied me ever since my entire life to this day; I cannot imagine my life without that!
- ☑ For decades I have been involved in various work in the Brethren Church: 20 years the youth leader; many years at the Board of Elders; preaching; for 2 terms during the communist regime I was elected as the lay member of the Executive Board of the whole church - because of that blackmailed by the State Secret Police for “cooperation” – with the God's help I refused and survived;.....
- ☑ During these years I have made a lot of experience confirming promises from the Bible, such as:

Mt 10,18: On my account you will be brought before governors and kings.. 19..do not worry about what to say or how to say it. At that time you will be given what to say

→ pressure from STB

Mt 6,33: But seek ye first the kingdom of God and his righteousness, and all these things shall be added unto you

→ science was never at the first place in my life but regardless of that I have reached many respected positions

Why and how I became a physicist ?

☑ During the communist times being a kid from a Christian family at a small city (Kutna Hora) = problems after ☑ finishing primary school I was not allowed to continue at a high school, and after high school to apply for a university; without our human activity but prayers, in both cases at the last possible moment the ban was lifted;

however, in the case of the university I got permission to apply only to 3 technical fields – I went to the Czech Technical University in Prague (CTU)

☑ I graduated in Materials Science - started to work at the Academy of Science; during the „Prague Spring“ (1968) I married and was allowed to accept a fellowship at Rice University, Houston, TX; graduated there with PhD in 1971 and, regardless of the Russian occupation, we returned to Prague; I was allowed to work at the Academy, but banned from teaching (*“not the right person for interaction with students”*), no traveling (even to Soviet Union *“because of study in US and being a Christian”*), etc.

☑ After the fall of communism I was elected to management of my institute (deputy director and director) and of the entire AS; appointed by the Government for two terms to the Council for R&D and then for two terms to the Presidency of the CSF; started teaching at CTU; etc.; at the international level I became a member of several international bodies, such as of the European Science Foundation, Euratom Scientific Council, etc.; lectures and scientific cooperations at many places around the world – USA, Canada, Australia, Singapore, Japan + many EU countries

two principles: 1) everywhere always openly confess that the faith is No.1 for me, not the science;

2) I seriously took my work as service to God and man

FAITH

1. What is „faith“ (in general):

Oxford Dictionary: 1. Complete trust or confidence in someone or something

2. Strong belief in the doctrines of a religion, based on spiritual conviction rather than proof

Merriam-Webster: 1. firm belief in something for which there is no proof

2. something that is believed especially with strong conviction

3. a system of religious beliefs

Comments:

i) Where there is evidence, no one speaks of “faith.”

ii) In a broader sense our daily life is based on „faiths“ - that there exists a certain order, that there is the repetition of the facts,... (timetable, opening hours,..)

iii) To "believe in" (to trust) is a distinct from "believing that".

2. What is not faith (for me)

faith is not the antithesis of reason, (and therefore of science)

Why:

i) a number of scientific theories is based on "certain assumptions" – e.g. nonrandomness of the phenomena, validity of natural laws, causality;

ii) science is working with "axioms" which cannot be derived or proven; they are just “taken to be true”;

iii) scientist are accepting as truth results done by someone else without being able to make sure that they were correctly worked out;

3. Christian faith

Definition in essence the same as the secular definitions - trust, confidence, no proof: *Heb 11,1: Now faith is confidence in what we hope for and assurance about what we do not see.*

Important additional remarks:

☒ The true personal Christian faith is just one (no catholic, protestant, etc.) *Eph 4,4f: There is one body and one Spirit,one Lord, one faith,.....*

☒ It is not enough to believe that God exists - *Jas 2,19: You believe that there is one God. Good! Even the demons believe that...;* many people do just that, supplemented by "good deeds", by formal observance of rites and other instructions, etc. - and they regard that as the true Christian faith, but that is just “religion”; we are called to believe (trust) to (in) God

= putting our entire life and eternal destiny in the hands of Jesus who is the only Savior of the world;

☒ faith is clearly reliance on unseen - we cannot see God but we can see the evidence of his work all around us (Paul to Rome 1,19: *"...since what may be known about God is plain to them, because God has made it plain to them"*).

(*cit. of Christian writer Fritz Ridenour: "The existence of God and His plan of salvation man cannot prove by logical arguments and factual evidence. If it were possible, the "greatest minds" would believe first and the poorly equipped intellectually would not have a chance"*).

4. Faith versus Religion

True personal Christian faith - not just formal affiliation, or fashion,... - is the core of the Christian teaching - in NT is mentioned - using various expression (faith, belief, to believe, trust,..) - over 500 times.

However, into struggle with science more often gets just religion

"Religion" (*for me*) = a system of fixed ideas about the world and man's place in it with 'prescribed ceremonies' and certain morality (good deeds).

(*cit.:* *"Many intelligent and educated people in good faith, defends the right of religion to a place under the sun. They represent it as something enriching, a suitable alternative to consumer vision of the world, a source of comfort and hope. Religion thus becomes part of the culture, lifestyle, view of the world, philosophy of life ... And it seems as though almost went round without God"*).

Unfortunately, even in Christianity a personal relationship with the living God can be replaced by a certain system of "truths", attitudes, rituals, and a certain way of life, which we think is correct, and goes without a deeper personal relationship to God.

Then: often bitter fighting with science is done in the name of “religion”, not true faith

In my experience and conviction, Christians who allow themselves to be lead by the Holy Spirit, will have other tasks than “fighting science”

SCIENCE

1. What is "science"

Oxford Dictionary: The intellectual and practical activity encompassing the systematic study of the physical and natural world through observation, deliberation and experiment.

Merriam-Webster D. (shortened):

1. the state of knowing: knowledge as distinguished from ignorance
2. a department of systematized knowledge as an object of study;
3. knowledge or a system of knowledge covering general truths or the operation of general laws especially as obtained and tested through scientific method

Comments: "scientific method" = almost an incantation - "*scientists have demonstrated by scientific methods that....*". The scientific method is simply a method or process of systematic observations, deliberation, measurements and experiments, followed by formulation, testing and modification of hypotheses.

Basic methodology: experimental observations, analysis, synthesis, inductive reasoning, deduction, description, comparison.

2. Evolution of views on science (examples only)

Plato (429– 347 BC) introduced the concept of a single supreme science, from which flowed the foundations of the individual sciences.

Aristotle (384–322 BC), on the contrary, stressed the necessity to examine each area differently, especially by observation, and accordingly to set up a different science.

...

Kuhn (1922 – 1996) came up with the theory of alternating periods of accumulation of knowledge and of the scientific revolution, when the paradigm (base) of science must be changed.

Popper (1902 – 1994) sharply distinguishes the truth from certainty – scientific explanations "*consists of the search for truth - not looking for certainty. All human knowledge is fallible and therefore uncertain.*"

Etc.

Conclusion: Scientific cognition should be fair and honest and should accept possibility of "new developments". No theory can be considered absolutely "certain" and unchanging.

RELATION between SCIENCE AND FAITH (notes)

☒ for centuries without problems - Christians took as a task from God "to explore and conquer the world" (Gen 1:28)

☒ Around 11. to 12.cent. old Aristotle teaching was developed in Islamic countries into a "double truth" = what is true in theology (philosophy) may not apply in science;

☒ Thomas Aquinas (13.st.) divided things into those that can be understood by "the study of nature" and other by "the study of grace"; not fully accepted by both sides - for Church the Bible = textbooks vs. later the "Enlightenment" stressed the REASON. conflict begins

☒ 18. to 19. cent. = scientific discoveries have led many to believe that everything can be – and eventually will be - describe by "science";

☒ 20.cent.: tightened to the extreme on both sides by the ideology (politics); e.g. to ban Christian religion in some countries X prohibition even to mention evolution; etc.

Note: in the 20th century probably still the majority of scientific discoveries have been made in countries with "Christian background"

WHAT gives me FAITH and what SCIENCE taught me in my life

Faith

☒ leads to humility (even in science); to work with the knowledge that we will never know everything - we need to humbly recognize our limitations;

1 Co 13,12: "For now we see only a reflection as in a mirror; then we shall see face to face. Now I know in part; then I shall know fully, even as I am fully known".

☒ the meaning of my life - not my fame is important, but the glory of the Lord God & service to others

☒ personal peace and hope for the future - derived from God's grace and love

☒ system of values

☒ clear look on myself without the "rose-colored glasses", but also without the inferiority complex

Science

☒ the need for exactness, accuracy, honesty at work

☒ leads to systematic approach

☒ that there is a certain degree of causality (classical physics) = linkage of mechanisms of processes with the results, allowing for some prediction

☒ and vice versa existence of the uncertainty principle that leave space "open"

☒ feeling for searching and finding relationships

SCIENCE and FAITH

Describe what do you see:



forester: so much cubic meters of good wood;
some self-seeding growth

gamekeeper: a place for that and that animal, birds, etc.

biologist: will give Latin names of all species there...

painter/artist: meadow with flowers and dense forest
behind her, preventing to see the landscape ...

physicist: forest

military man: a possible good hideout etc.

**all are talking about the same picture, but each describes differently
what he sees – there is no sense to discuss, who is correct**

Also both - science and faith - describe the world, man, ... in different
ways:

Faith tells me "**WHY**" (who is behind everything, why am I in the world,
what is the real nature of man, meaning of the life, ...)

Science describes "**HOW**" (possible mechanisms, processes, how it
works,...)

(Anon.) "Faith gives you the confidence that there is a God who loves you.
With faith you can come to God in prayer.

CONCLUSION with several (for me) relevant Scripture verses

- Ge 1,27-28: So God created mankind in his own image, in the image of God he created them; male and female he created them. God blessed them and said to them, "Be fruitful and increase in number; fill the earth and subdue it.

- Col 3, 23: Whatever you do, work at it with all your heart, as working for the Lord, not for human masters.

- Ro 1, 19.20: .. since what may be known about God is plain to them, because God has made it plain to them. For since the creation of the world God's invisible qualities — his eternal power and divine nature — have been clearly seen, being understood from what has been made.

- 1 Co 13,12: For now we see only a reflection as in a mirror; then we shall see face to face. Now I know in part; then I shall know fully, even as I am fully known.

- Heb 11,1.3: Now faith is confidence in what we hope for and assurance about what we do not see. By faith we understand that the universe was formed at God's command.

- 2 Co 5,7: For we live by faith, not by sight.