

## Science and Religion?

### Eight crucial points

The editors asked us to reflect on questions as ‘Can science solve our fundamental problems? What is the relationship between science and religion in modern societies?’ Big questions, indeed. In this chapter, I shall give my answer by referring to four points concerning the sciences and four points about science and religion.

#### ***(I) Common to all sciences: informed and self-critical argumentation***

At the outset, we need to explain what we mean by these terms: Here I understand ‘science’ in the sense of ‘*Wissenschaft*’, that is, not merely as natural science (*Naturwissenschaft*), but, broadly speaking, as all the disciplines at a full-scale university. As a reminder I shall often use the term in plural, not ‘science’, but the ‘sciences’. I shall return to the term ‘religion’ below, but first some remarks on the sciences.

When talking about the sciences ‘solving our problems’ it is often assumed that the sciences are useful in an instrumental sense, that is, as a tool for improved governance and economic growth. However, not all sciences are instrumentally useful in a Hempelian sense (Hempel, 1949). In general, the humanities are not (Skirbekk, 2007). Their potential value, and use, is of another kind.

Hence, ‘value production’ in terms of instrumental usefulness for politics or economy cannot be the common legitimation or the common denominator of all the various sciences. They are different both as to the status of their research results and as to what the researchers are doing, for instance in labs, fieldwork or libraries. However, in all disciplines, how different they may be from one another, researchers in spe have to defend their theses in a doctoral disputation. In this sense, not instrumental usefulness, but argumentative and self-critical discussion is that which all university disciplines have in common.

Surely, in reality there are great differences as to the extension and depth of the argumentative activity, not least as to its self-critical and reflexive part. Moreover, in scientific communities there is also a demand for originality, for new conceptions, methods and technics, and there are elements of discretion and of tacit competences. Nevertheless, within all of this at crucial moments there is an urge for a competent and professional ‘give and take’ of reasons.

This is my first point: That which is common to all sciences, at least ideally and potentially, is not instrumental usefulness, but informed and self-critical argumentation.

## ***(II) The need for critical studies of the sciences***

Also in a broader scope, beyond the inherent activities of the various disciplines, self-critical discussions are needed; this is true both for the interface between the various disciplines and for the relationship between the sciences and society. These are a few reminders: Each discipline has its proper conceptions and perspectives, as e.g. in economics, ecology, sociology, political science, and psychology. Thus, each discipline (and subdiscipline) reveals some phenomena and disregards other phenomena. Moreover, there is no ‘God’s eye view’, a kind of meta-science and meta-language that encompasses all the different conceptions and disciplinary perspectives in a higher semantic synthesis. As finite human beings all we have are going-between and reflection-upon the various disciplines, activities that require some ‘double competence’, some insight in what is going on in the disciplines under consideration.

Now, because of the perspectivist nature of the various sciences we may consider two major challenges as to the relationship between the sciences and society, not least for political actions: (i) There is always a danger that one discipline (or even subdiscipline) may get a predominant position (among political agents, or in the public awareness), at the sacrifice of other disciplines that reveal other aspects of the problems we are facing. A flagrant case is the discrepancy between the dominant position of (short-term) neoliberal economics and the weaker position of (long-term) ecology. This is a general challenge in modern societies with extensive disciplinary differentiations (specializations). We may e.g. talk about ‘economism’ in cases when some economic disciplines get ‘the upper hand’ at the sacrifice of other relevant disciplines, and about ‘biologism’ in similar cases for biological (or neuroscientific) disciplines, or about ‘contextualism’ in cases when contextualist cultural studies get a dominant position, disregarding the deeper epistemic claims, including their own. (ii) Due to the perspectivist nature of the various sciences there is also a danger that the practitioners in one field (say, nuclear physics or biochemistry) do not envisage the potentially unintended consequences of their own research, a challenge that requires other disciplinary perspectives, e.g. from the social sciences.

This means that there is a ‘struggle between the faculties’ (the disciplines) – not merely within multidisciplinary institutions such as universities, but also in society at large, a struggle that is often related to strong political and economic interests. Hence, we should always keep a critical eye on the possible power-relatedness of the various scientific disciplines and on how they are used and implemented in modern societies. Add to this that in modern societies we

have ‘Big Science’, based on strong economic agents and institutions in politics and industry, military industry included.

In addition to the extensive differentiation of disciplines and specialities, there is a massive growth in the number of researchers and research institutions, including published reports and results. Thus, it has become increasingly difficult to obtain a professional overview of what is going on in a traditional discipline, and it has become increasingly tempting to remain within one’s own narrowly conceived professional network. Additionally, thereby one avoids disturbing and critical remarks from researchers in neighbouring fields and from enlightened and interested laypeople. In this sense, we have a new kind of deficient overview and lack of transparency (*eine neue Unübersichtlichkeit*, cf Habermas, 1985).

All in all, this means that there is a need for critical and informed discussions of the various sciences and of their use and misuse in modern societies – in short, a need for critical and informed ‘theory of the sciences’ (*vitskapsteori*, cf NAVF, 1976), by someone who has a reasonable knowledge of the disciplines under consideration. Since all the sciences should be considered, not only the natural sciences, these ‘studies of the sciences’ will also include a self-reflective and self-critical activity as to their own validity claims; in this sense they have to include an ‘internal’ perspective, in an interplay with the ‘external’ ones.

This is my second point: Due to the scientific plurality and its intervowenness with various activities and agents in modern societies there is an inherent and urgent need for critical studies of the sciences, for a self-critical critique of the sciences (*Wissenschaftskritik*).

### ***(III) An urge for improvement***

Karl Popper had at the outset a clear-cut demarcation for what it means to be a science: falsifiability. On the other hand, for postmodernists the sciences are seen as social activities not to be neatly distinguished from other social activities. Counter to this, Merton had his ideal-type norms for scientific research (the CUDOS, the scientific ethos; rephrased as communalism, universality, disinterestedness, and organized scepticism).

Above we have indicated that informed and self-critical discussion should be seen as a common denominator for the sciences broadly defined. However, this is no demarcation line between scientific research (in the broad sense) on the one hand and other social activities on the other: In modern science-based and technology-based societies there are a huge number of science-based professions and activities outside the realm of scientific research, as (for instance) from engineers to teachers and also for innumerable activities in our daily life. Moreover, in modern democratic societies there is a need for enlightened discussions in public

space, as a precondition for reasonable and fair political decisions. Furthermore, in modern pluralistic societies, where fewer activities are predetermined by a given tradition or religion, the only way, for finite and fallible human beings, to be reasonably sure that one's own opinions are liable, is open and honest discussion with other persons (cf John Stuart Mill).

In other words, science-based and science-related activities are spread out into society at large, beyond the realm of scientific research; moreover, the urge for enlightened argumentation and discussion permeates modern democratic societies, beyond the realm of scientific research. In this sense, the idea of a demarcation 'line' would lead astray, and hence we should rather talk in terms of gradual transitions and alternative versions – in short, we should talk gradualistically, not merely dichotomically.

However, this does not mean that an ideal-type distinction between scientific and other social activities is simply obsolete and 'deconstructed' (in postmodernist terminology). To make the point we may compare this distinction with the ideal-type distinction between health and disease: Surely, it does make sense to talk in gradual terms; we are for the most part more or less healthy or more or less diseased in different ways. But in talking in gradual terms we somehow presuppose an analytic distinction between health and disease. The underlying point about what is ideal and what is undesirable, could often be taken a step further: In most cases, the practical concern is that of healing an injury or of avoiding a disease, not that of perfection (with the exception of affluent capitalist societies in search for increased consumption beyond the level of basic needs). In short, the aim is in most cases that of improving the situation, getting away from that which is seen as negative. In this respect, we could indicate a similarity with scientific activities, especially in cases of enlightened and open discussion among fallible and reasonable human beings: in these cases, the main point is that of trying to improve one's opinions and basis for action, not to reach the final Truth.

This is my third point: The ethos of enlightened and self-critical discussion does not represent a demarcation line for scientific research, nor for scientific activities in a broader sense. In modern societies, this ethos indicates a general urge for improvement, away from that which is conceived as less reasonable toward that which seems to be better, as a communicative and gradual search for better reasons

#### ***(IV) Science: part of the problem, part of the solution***

When the sciences are defined as above, to what extent could they be said to 'solve our fundamental problems'? First, the sciences themselves, conceived as scientific research isolated from societal agents and institutions, can hardly solve any practical problems, only theoretical

ones. On the other hand, theoretical knowledge can certainly have an impact on our self-understanding and our opinions about the world, so to speak by its own force, without any external plans or projects; this is true for insight stemming from heliocentric astronomy and Darwinian theory of the origin of species, and from historical interpretations of religious scripture and Freudian theories of sexuality, just to mention a few.

However, even though scientific research and results by themselves cannot solve our practical problems – this holds true for most of the urgent problems related to economy and ecology and to governance and welfare politics – scientific research can contribute to the solution of practical problems when it is adequately internalized or implemented by suitable agents and institutions. The question as to how this could best be done is a matter of practical experience and discretion, often to be combined with various kinds of scientific insight, especially from the social sciences.

Urgent problems, such as those related to renewable energy and climate change, to future supply of fresh water and food, and to unsustainable consumption and reproduction, are utterly complex already at the epistemic level, for instance in the sense that various disciplines are required. How do we decide what kind of discipline and knowledge that is required in the various cases? How do we decide whether there is an unreasonable dominance by some disciplines and their disciplinary perspectives at the sacrifice of other disciplines that might also contribute to a better understanding of the problem under consideration? And again, what about unintended consequences (often unconceived in one's own perspective)? What about epistemic uncertainty? And what about the danger of various kinds of power-related influence on research processes and research reports? These are problems already at the epistemic level. Then we have the complexity and challenges at the institutional level, including the danger related to pressure groups and special economic interests and political agents, including military and religious organizations and agents. Surely, for this reason there is a permanent need for a critical and self-critical awareness of epistemic challenges as well as of institutional shortcomings and irregular power-relations.

On the other hand, it won't do without institutions and agents. But then there is a decisive difference between irregular power-relations without a fair and reasonable legitimation, and power-relations that are regular and regulated, for instance by institutional division of power and the rule of law, and that are thus to be seen as legitimate power-relations.

Constitutional democracy and democratic law-giving are seen as legitimate institutions, fostering legitimate decisions. The paradigm case is a self-contained society where those who give the laws are those for whom the laws apply and for nobody else, and where those who

give the laws understand what they are doing, including the implications and long-term consequences of what they have decided. This is the principle of popular sovereignty. Laws and other major decisions are legitimate when they would have been agreed upon by all those concerned. This is a legitimation bottom up, not top down, be it by a sovereign king or by divine command (the latter becomes problematic when there are more than one confession, as we shall see below).

However, in this paradigm case for democratic decisions and law-giving there is an inherent problem when faced with persistent minority constellation. This problem cannot be solved by democratic majority vote. At this point, there is a need for an egalitarian political culture characterized by moderate socio-economic differences and a basic solidarity and mutual trust. Moreover, without a basic trust in procedures and persons, those who loose an election could be reluctant to leave office. Hence, trust is crucial for a democratic rule; but trust is something that has to be experienced and internalized by those concerned; it cannot be brought in from the outside, nor can it be installed merely by a decision.

However, in modern democratic societies this paradigm case for the legitimation of democratic decisions and democratic legislation has become more or less obsolete, for three reasons: (i) Space. In a modern globalized world decisions made in one country tend to have consequences and implications of citizens in other countries. For instance, think of decisions made in the US and of their implications for other countries and their citizens. (ii) Time. Due to modern science and technology, and modern institutions, quite a few of the decisions made by our generation have extensive implications and consequences for future generations. (iii) Insight. In modern society, based in sciences and technology, most citizens have an insufficient insight in the consequences and implications, for future generations, of the various projects and arrangements that have been brought forward by agents and institutions in our generation. In short, for these three reasons, there is a major discrepancy between the paradigm case of legitimate democratic decisions and many of the decisions that we are making.

What could possibly be done? Just to put a label on the dilemmas: (i) The first dilemma, that of space, is primarily an institutional challenge, which soon becomes a political and normative issue. What kind of political borders are feasible and also desirable? (ii) Also the second dilemma, that of time, is at the outset an institutional challenge, which soon becomes a political and normative issue. Our western democracies, based on frequent elections, have the great advantage of opening for a rejection of an unpopular government by the voting majority; but it works in a short-term perspective, without an institutional safeguard for the voices of future generations. The same is true of western capitalism, with a short-term perspective for the

economic profit of invested capital. In fact, in a geopolitical perspective, only China seems to have political institutions with a basic concern for the assumed needs of future generations, such as food and renewable energy – not for idealistic reasons, but of self-interest, since the Chinese regime seems to presume that it shall remain in power for another 20 or 50 years, and then it needs to take action now in order to counteract social unrest in the future. (iii) The third dilemma, that of adequate insight, is both an institutional and an epistemic challenge. For one thing, it is worthwhile recalling that modern democratic societies have extended and mandatory education for all citizens (in our countries, formally for 10 years). Historically, in our country, the legitimation of a mandatory and common education for all citizens was political, that is, to foster an egalitarian political culture, suitable for a parliamentary democracy. But today, in modern societies, this challenge has become even more acute. A short story may illustrate the point:

It is said that at the time of the attack on the Twin Tower in New York on 9/11 a journalist heard the following utterances by two US-citizens watching the whole thing: “This is like Pearl Harbor”, the first said. “What’s that?” the second person asked. “That was when the Vietnamese attacked us and the Vietnam War started”, was the reply. The point of the story is this: These were citizens with the right and responsibility of voting for the US president, a mighty agent with the power to make decisions with deep and long-term implications for many people, at home and abroad. Hence, as a citizen of a democratic society – with the right to vote and speak out, with the right to organize and demonstrate – one does have some co-responsibility for what is going on, certainly always according to one’s own position and capabilities, and certainly only a minor part, but still, as a citizen of a democratic society one does have some co-responsibility for what is going to happen. This point has a crucial implication: an unnecessary lack of insight in major challenges of our time is to be blamed, both for the individual (all depending on personal resources and positions) and for society at large. The latter means that political and social agents have an obligation to further a good common education and foster an enlightened public space. The former means that each citizen (again according to personal resources) has an obligation to be reasonably updated on major issues. The liberal ideal of a total individual freedom ‘for anything legal’ (as stated in ‘personal ads’), is outdated in modern democratic risk-societies with some degree of shared co-responsibility. This means, bluntly stated, that each citizen in a modern democratic society has a basic obligation to improve one’s one status as an enlightened and autonomous person (in the Kantian sense of *Mündigkeit*). A concern for various kinds of scientific insight, and for a self-critical and argumentative approach, are thus included.

Now, back to the initial question: are the sciences supposed to ‘solve our fundamental problems’? As a response, I restrict myself to two short remarks:

(i) Some of the main problems in modern societies are themselves co-determined by the sciences and science-based projects and technologies and science-related institutions – though often, that has to be added, by one-sided usage and implementation, for instance to the extent that scientifically one-sided technological and economical projects are given the upper hand, politically and institutionally. Insofar, various sciences are parts of the problem.

(ii) But since there is hardly any way back to a premodern prescientific world, we are at the same time obliged to look at the various sciences for reasonable contributions that could be helpful in coping with the main problems in modern societies. This goes for our understanding of the actual situation and for our political discretion, but also for institutional and technological arrangements that seem to be beneficial for some of our main problems. Insofar, a critical approach to various sciences represents a part of a reasonable response (not to use the ambition term ‘solution’).

Two more remarks, recalling some major challenges for university research and education in this respect: In modern mass universities the uniform institutional structure and market-related financial foundation (e.g. the Bologna reforms) counteract both the internal and the interdisciplinary ‘criticism of the sciences’ (*Wissenschaftskritik*), at the same time as many research projects, partly due to these institutional and financial structures, tend to be rather trivial (as in many empirical disciplines) or to disregard the self-referential epistemic challenges in their own projects (as in many interpretive disciplines, thus fostering what in a technical term is called ‘bullshit’, cf Harry Frankfurt).

So this is my forth point: For various reasons the sciences themselves cannot ‘solve our fundamental problems’. To some extent, they are part of the problem. However, when taken critically and self-critically, in awareness of their inherent differences and challenges, and also in awareness of their common ethos in terms of informed and open discussion seeking better arguments and views, the sciences could definitely be seen as important elements in our complex and fallible dealings with the various urgent problems of our time.

Then, what about religion and science, in modern societies? By researchers in the descriptive field of ‘religion studies’ (*religionsvitskap*), different from theology and from the philosophy of religion, the term ‘religion’ is conceived in different ways, as rituals and institutions, as tradition and culture, as belief systems and attitudes. However, we recall that also theology and philosophy are ‘sciences’ in the sense of *Wissenschaften*, that is, as interpretive and

argumentative activities, with epistemic validity-claims. We may start with a general observation:

***(V) Plurality of religions: a need for clarifying definitions and convincing justifications***

In our times there is a pluralism of religions, such as different and often opposite versions of each of the three monotheistic religions, Judaism, Christianity, and Islam, or New Age, Satanism, and witchcraft, old and new, and also other world religions, such as Taoism, Hinduism, and Buddhism, and different forms of religious practices with or without a belief in God or theological theses. For instance, one God, or many, or none? Is God radically separated from the world and humankind, or are there transitions between God and human beings, and between God and the world? Is God benevolent, or evil, or both? Given this pluralism: when we talk about religion, who has then the right to decide, for others, what falls inside or outside?

This is a semantic point with extensive practical implications, both legally and politically: This open-ended, indeterminate pluralism implies that an appeal for general religious rights (of a legal or economic nature) has no longer a clear and definite meaning. This holds true also for what is said about ‘religion’ in legal texts, such as the UN declaration of human rights. Due to this indeterminate pluralism of ‘religion’, the term has to be defined, and if religion is said to deserve respect and legal rights, that has to be justified in each case, with convincing arguments. In other words, if there are special reasons why a certain religion deserves special respect and support, this has to be shown in each case by arguments that are universally understandable and convincing, that is, by universally valid arguments. In short, due to this semantic pluralism, the reference to something as ‘religion’ is in itself no reason for special respect or concern.

This is my first point: In our societies, there is a plurality of religions, of very different kinds. Hence, there is no reason for respect or support simply because something is taken to be a ‘religion’. To deserve a special respect and legal support there has to be a clarifying definition and a commonly convincing justification in favour of that special kind of religion.

***(VI) In the New Age: a close relationship between monotheism and science***

‘Religion and science’ – it goes without saying that it all depends on how the terms are conceived. We have already commented on the term ‘science’, and in the paragraph above we have pointed at the pluralism of ‘religions’. Now, to get started let us focus on some main points in the interplay between science and religion in western history.

(i) During the medieval ages in Western Europe there was a close relationship between theology and philosophy (in many ways the main sciences at the time), and surely there was an intimate relationship between theology and religion, be it Jewish, Christian, or Islamic. In Platonic (Neoplatonic) and Aristotelian philosophy, there were major theological elements, both in ontology and epistemology and in moral and political theory.

(ii) From late medieval ages into the new age, up to the eighteenth century, there was similarly a close relationship between monotheistic theology and religion on the one hand and the emerging new natural sciences on the other (cf Shapin). In this connection there were two underlying images: (a) The narrative of the Two Books: There was The Holy Scriptures, written by God and to be interpreted by the theologians, and the Book of Nature, written by God in mathematical symbols, to be discovered and reformulated, in a mathematical language, by the natural scientists. (b) The narrative of God as Mechanical Mastermind: The universe, as gigantic mechanical clockwork, has God as its mechanical mastermind, and by their experimental work, it is up to the natural scientists to discover the underlying laws of nature and formulate them in a mathematical language.

This, for sure, went against some main ideas in the Aristotelian philosophy of nature, and thus it went counter to those theologians who insisted on its ontological primacy. The trial against Galileo in 1633 is the paradigmatic case of this controversy. However, generally speaking, the new natural scientists in Western Europe worked on the background of religious images. Atheism was largely a French invention by the end of the eighteenth century! Even a critical enlightenment philosopher like Voltaire was a deist.

This is my second point, on religion and sciences: At the outset, in the new age, there was a close and positive relationship between religion and science, not least among the new natural scientists.

### ***(VII) The inherent urge for a critique of religion***

Above we referred to the need for a self-critical critique of the sciences (*Wissenschaftskritik*). Then theology and philosophy are included. However, there is also a need for an informed and self-critical critique of religion (as we already indicated above). But there are different (partly overlapping) kinds of critique of religion, in short:

Moral-based criticism of religion tries to show that certain forms of religion are morally problematic or rejectable. Targeted are utterances and demands found to religious scriptures or doctrines, but also acts and attitudes ascribed to religious persons and institutions.

External criticism of religion tries to show that certain forms of religion are merely epiphenomena, expressions of underlying psychological and social circumstances.

Internal criticism of religion tries to take literally some of the utterances in certain forms of religion and thereby raise an intellectual criticism of the level of precision and of the truth-claims in that which is said or presupposed.

The role of the various sciences, for the critique of religion, could be summarized in this way: (i) External, causal explanation: referring to social causes, as e.g. in Marx – religion as opium for the people, and thus as false consciousness – or psychological and psychiatric causes, as in Freud – religion as psychological displacement. But then there are also sociological pro-arguments in favour of religion, as in Durkheim, seeing religion as important for social cohesion. (ii) Historical positivism: the secularization thesis, e.g. in Comte – who saw history as a development by different stages: the religious, metaphysical, and scientific stage. But then there are counterarguments, e.g. in late Habermas, who rejects the secularization thesis and emphasizes religion as a resource of insight and values needed in modern societies (Habermas 2005). (iii) Natural scientific knowledge: the origin of the universe (palaeontology), the structure and scope of the universe (Kepler, Galileo, modern astronomy), natural scientific explanations (Newton, God as ‘watchmaker’, without miracles and magic), the origin of species (Darwin) on the background of dramatic cosmological events (geo-history). Each one of these challenges demands a theological response. However, when taken together these cases of natural scientific knowledge strongly indicate that the universe is no safe and friendly place. (iv) Logical positivism: theory of knowledge, focusing on the question as to which utterances can be seen as cognitively meaningful, and gives the following answer: only well-formed, empirically verifiable propositions are cognitively meaningful (Alfred Ayer and the Vienna School).

In short, in talking about the relationship between religion and science, these well-known critical arguments should be mentioned. However, being well-known in modern societies these are the kinds of arguments that have been seriously considered by contemporary theologians and for this reason modern university-based theology has been intellectually modernized. Here again there were long learning-processes. We may briefly recall some major points:

The new natural sciences, experimental and mathematically formulated as in Newtonian mechanics, were gradually interrelated with technological developments and thereby related to economy, and also to the State, for instance for the development of infrastructure and military technology. By the structure of their causally explaining methods, these sciences delivered

explanations, predictions, and technical maxims (Hempel, 1949). Hence, by these new sciences we could obtain better control of natural events. However, in the same period, with new States and a new religious pluralism by divisions between Catholics and Protestant denominations of various kinds, there was also a renewed concern for interpreting disciplines: the interpretation of legal texts in jurisprudence and the interpretation of religious texts in theology. For, a text does not interpret itself; it has to be interpreted by somebody. Moreover, there are often different interpretations of the same text. Hence, we are faced with the question: Why is my interpretation better than the other interpretations? For a serious answer to this question, one has to give reasons as to why one interpretation is more reliable than another. Moreover, different religions have different Holy Scriptures, and hence we are faced with the question: Why are my texts the right ones, and not those of the others? In short, there is an inherent urge, within the religions based on Holy Scriptures, to move from interpretation toward rational argumentation. This reminds us of Enlightenment, as in Kant's famous definition: *sapere aude!* Have the courage to use your own reason, in a self-critical discussion with other people! Moreover, in Kant the term 'critique' does not mean a negative denial (cf his 'critique' of pure and practical reason), but a serious test. Hence, modern societies are science-based, not only by the new natural sciences, but also by renewed interpretive disciplines and self-critical argumentation. However, this has not been recognized by everybody. For instance, Sayyid Qutb (cf his book *Milestones*) was in favour of natural sciences, and certainly of his own religious convictions, but he disliked humanities and social sciences. The same is true of people like Ahmadinejad, engineer and religious fundamentalist, and also of influential groups in the United States who conceive of freedom of religion as a freedom from criticism, not as a freedom to criticize. These people embrace the modern sciences from Galileo and Newton, but not the Enlightenment tradition from Voltaire and Kant.

This is now my third point: For the three monotheistic religions, there is an inherent urge for a critique of religion. However, due to the critical interplay between the various sciences and religion, modern university-based theology in the western world has largely been intellectually modernized.

### ***(VIII) Modernization of consciousness***

But is not religion (whatever it means) beyond the scope of rationality, either because it is deeply personal or because it can only be understood in an internal perspective, that is, by the believers themselves, or maybe by their spokespersons, such as rabbis, priests or imams? There is something to be said in favour of such objections. On the other hand, when it comes to the

three monotheistic religions – Judaism, Christianity, and Islam – they do raise universal validity-claims, each one of them, about their Holy Scriptures and about the one and only God. Structurally, on these decisive points, the three monotheistic religions are faced with the same kind of challenges; and consequently, due to these universal validity-claims, they are inherently open for enlightenment and rational criticism:

(i) Based on Holy Scriptures: In a modern pluralistic society, we are faced with the fact that there are other interpretations of ‘my’ Holy Scriptures. Hence the question: why are my interpretations the right ones? And we have to realize that there are other persons who have other Holy Scriptures. Hence the question: why are my texts the right ones? To answer these questions, reflexivity and reasoning are needed. Self-critical interpretations and reasonable argumentations are required.

(ii) Monotheism, belief in one God (Jahvé, Allah): For all three monotheistic religions there is only one God (mono-theism), who is at the same time the creator (and supporter) of the world, the lawgiver, the judge, and the executor. Given that God is almighty, benevolent, and omniscient – he is all good, he knows everything, and he can do whatever it is – then, when faced with major tragedies and disasters (such as the earthquake in Lisbon in 1755) we do have a major problem, head on: How could God allow this to happen? In theological terms, how can we cope with “the problem of evil”? On this major problem in the three monotheistic religions, there are ongoing discussions, from the Book of Hiob in the Old Testament up to Leibniz and his theodicy in the 18<sup>th</sup> century, and further on in our time. How should we theologically understand and explain major disasters – earthquakes, tsunamis, sudden ice ages or exploding calderas? Where was the voice of Jahvé in Auschwitz? Arguments from free will, or from unavoidable interdependence of good and evil, do not cope satisfactorily with such major disasters and tragedies that do not appear as necessary (neither empirically nor logically), and that cannot be understood as divine punishment of sinful acts committed by the victims.

Moreover, at this point there is even a paradoxical danger of “involuntary blasphemy”, among uneducated and fundamentalist believers, who regard themselves as true defenders of the right faith: When God (Jahvé, Allah) by these people is conceived of as the sovereign creator who has given us strict laws and rules of behavior, and who at the same time operates as a severe judge and executor, sending condemned sinners to hell for eternity, then the ‘problem of evil’ reappears as a question as to whether God, conceived of as such a brutal master, in reality acts like a Satan. Thus, their conception of mono-theism looks like a mono-satanism – and that, for sure, must be seen as blasphemy, even if it is not recognized as such by those who think in these terms. In short, in these cases we have involuntary blasphemy, but blasphemy

nevertheless. Moreover, the same holds true for uneducated believers who think that in our dangerous and precarious world, where a huge number of people are starving and are without shelter, the supposedly merciful God is seriously and predominantly interested in what we eat and how we dress – no milk and meat, no pork, and no silk shirt for men! – which in reality means that God has no sense for proportions and thus He appears as a ridiculous figure – a blasphemous view, again a case of involuntary blasphemy.

In short, the three monotheistic religions are similar on these two essential levels: (i) interpretations of sacred texts, and (ii) the belief in one God/Jahvé/Allah as creator, legislator, and judge, and hence, they are faced with similar challenges, such as the problem of evil.

Then there are differences between (and within) these religions. For instance, they are dissimilar due to different historical conditions, e.g. as to whether they operated inside or outside the realm of political and military power, or as to how they were interrelated to the institutional and epistemic developments that were parts of early modernization processes. But for all three: today they are faced with the same basic needs for epistemic and institutional adaptation to the positive and necessary demands for an enlightened modernity, in short, for a “modernization of consciousness” (Habermas 2005):

(a) A recognition of various kinds of insight and knowledge that are established by sciences and scholarly disciplines, though critically conceived, but still as the best we have. Religious teaching and practices should be adapted accordingly.

(b) A self-critical reflection on, and recognition of, the plurality of religions and other “comprehensive doctrines” (Rawls 1993). Religious teaching and practices should be adapted accordingly.

(c) An institutional differentiation between the legal system and religion. Reasons given for common coercive laws should be universally understandable and the procedures should be universally acceptable.

These three points are in principle demands for everybody, though in each case dependent on personal background and resources. They are, first and foremost, general demands for political and religious leaders. However, when these demands for a “modernization of consciousness” are not coped with appropriately, then we do not live up to main preconditions for modern societies, with their variety of sciences and scholarly disciplines and their institutional differentiations, and with their pluralism.

Above we focused on the need for a self-critical critique of the sciences and now we have focused on a need for a self-critical critique of religion, in its interplay with the sciences in modern societies. It is worthwhile to recall that critique in this connection does not mean

rejection. The term should be taken in its Kantian sense: critique as a purifying process, as in the Kantian ‘critique of pure reason’ and ‘critique of practical reason’. The point of the critique in this sense is not a negative act of rejection, but a constructive act of improvement.

As my forth point I would therefore rearticulate my main message on science and religion: ‘Religion’ is no more a precise term and it is no more self-evident that ‘religion’ should be respected and legally supported. A normative justification is needed in each case. In short, religion is part of the modern world, though not without a critical interplay with the various sciences, which implies both a self-critical critique of the sciences and a self-critical and purifying critique religion, the latter characterized by a ‘modernization of consciousness’. In this sense, the sciences can at least help us in solving problems concerning scientific self-understanding and our understanding of religion in a modern world. These are my concluding remarks on the relationship of science and religion.

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