

THE PROMETHEAN MYTH  
AN ARGUMENT FOR  
METHODOLOGICAL ATHEISM

by

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*In public perception (in particular in secular Europe), technosciences are often considered as something verifiable, neutral, and without any relation to the religious realm. Looking back at ancient times, however, powerful mythical figures like Prometheus suggest that technoscientific developments and insights have always been tied to the religious and transcendent realm. Prometheus' heritage is still influential, inspirational, and visible today in arts, philosophy, the technosciences, and religious communities.*

*This paper analyzes the Catholic Church's position towards the technosciences and argues that it employs a binary approach in the evaluation of findings and developments in modern sciences and technology: advancements are either in line with religious worldviews (and their moral implications) and can thus be approved of ethically and theologically, or they (seem to) deny the existence of a higher being or (seem to be) contrary to religious ethics and are thus rejected. This paper, then, suggests that theology should advocate a methodological atheism to overcome this binary approach. Doing so would not mean to betray religious or theological convictions. Rather, it would pick up on an old and important tradition in theological reasoning of methodologically excluding the revelation in favor of reliance on reason alone to demonstrate the rationality and reasonability of faith.*

**KEYWORDS**

*Methodological atheism, Prometheus, religion, technology, sciences, evolution, reason, theology.*

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*What does Prometheus mean for us today?  
Without doubt we could say that this rebel, rearing up against the gods,  
might be a role model for humanity today  
and that this protest that happened some thousand years ago in the solitude of Skythia  
is coming to an end in a unique historic revolution.  
(Camus 1998)*

## 1. INTRODUCTION

Once upon a time, enlightened Europeans thought of Europe as the secular and rationalist space where science and technology, after their liberation from religious bondage, could thrive and did not have to answer to religious authorities anymore. Whenever European media reported on American controversies over Creationism and evolution, most of the European public bemusedly wondered how this could still be relevant in the 20th and 21st century. They were no longer amused when opposition to evolution spilled over to Europe and some religious and political leaders called for a reconsideration of the 'secular' understanding of science and technology.<sup>1</sup> The efforts of Cardinal Schönborn in Austria, Karin Wolff in Germany and Letizia Moratti in Italy are especially noteworthy because they caused a broad public controversy and failed to produce a fruitful or less biased discussion between theology and technoscience.<sup>2</sup>

Theological and political opposition to evolution has already caused significant controversy in 21st century Europe. In 2005, the Austrian archbishop Christoph Cardinal Schönborn published an op-ed in the *New York Times*, claiming "that by the light of reason the human intellect can readily and clearly discern purpose and design in the natural world" (Schönborn 2005).<sup>3</sup> Schönborn's article received broad attention on both sides of the Atlantic and from both critics and proponents. Some European politicians have joined Schönborn in his endeavor. In 2007, the minister of education of the German *Bundesland* (federal state) Hessen, Karin Wolff, called for a more 'interdisciplinary' attitude in the natural sciences. In particular, she suggested that in biology, the biblical narrative of creation should be

<sup>1</sup> The increasing popularity of creationism in all its forms in Europe prompted the Council of Europe to discuss the issue and publish a resolution on creationism and education (Joffe 2007; CCSE 2007a; CCSE 2007b; COEPA 2007; Neuhaus 2007).

<sup>2</sup> In my paper, I do not always clearly differentiate between the terms technology and science because a strict separation between those two disciplines is not 1) always possible because they are interrelated on many different levels and 2) for my argument not always necessary. Thus, I often use the term 'technoscience'. This choice is not unproblematic either, because 'technoscience' suggests a rather one-sided relation between those two disciplines (Rheinberger 2006, 20-39).

<sup>3</sup> In a recent symposium at the Austrian Academy of Sciences, Schönborn distanced himself from the Intelligent Design movement. He stated that he, as believer, recognizes a creator in the beauty of creation, but pointed out that this is by no means a scientific statement but a statement of faith (Schönborn 2009).

covered as an alternative approach to the world's origin, as an approach that is not so much concerned with scientific details but with meaning making (EPD/CV 2007). Already in 2004, Letizia Moratti, the Italian secretary of education tried, but failed, to ban the teaching of the theory of evolution in junior high schools because, according to officials, students at that age allegedly would not be able to understand such a complex theory (Schümer 2004; Graebisch&Schiermeier 2006; Nature 2004).

The Roman Catholic Church is an important and long-standing actor in this debate, both in the US and in Europe. Despite its hierarchical constitution, 'Catholicism' is not synonymous with 'one' opinion on the relationship between religion and technosciences. Nor is the discussion restricted to the field of natural sciences, even though it is probably the most prominent one. Rather, the Catholic approach encompasses a wide variety of approaches to natural sciences, media, technology in general and biotechnology in particular. This broad range of views becomes particularly visible in the comparison of Church documents with the works of some of the leading Catholic theologians. Official Church doctrine, for example, provides a strict framework for deciding when the use of biotechnology is permissible. The argumentation is based predominantly on a religiously informed understanding of natural law rather than philosophical reasoning. Some Catholic theologians, however, such as Karl Rahner, one of the leading Catholic theologians of the 20th century, are more open to the idea of human self-manipulation. In particular, he argues that manipulation through biotechnology is first and foremost a question of the technosciences. The Church's evaluation of other fields of technology, e.g. information and communication technology (ICT), often depends on how technology contributes to the religious and moral formation of the recipients or users.

Bearing in mind these controversies and different (and often divergent) approaches to technoscience, this paper will primarily focus on official statements of the Catholic Church on science and technology.<sup>4</sup> As in the Promethean myth, religious figures, philosophers, artists and writers, as well as scientists have always tied technological development to transcendent realities. Even today, theology is often caught up in a binary approach to science and technology: advancements are either in line with religious worldviews (and their moral implications) and can thus be approved of eth-

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<sup>4</sup> It is important to point out, however, that the tendency to establish a direct relation between technology and the religious is not limited to Catholicism, but can be found in other religions as well. As Marek Čejka (2009) points out in this volume, the assessment of the internet in Judaism depends – among other factors – on various religious convictions. Where it is not possible to exclude technology from everyday life, it is – with restrictions – integrated into the religious narrative but remains a source for possible conflicts.

ically and theologically, or they (seem to) deny the existence of a higher being or (seem to be) contrary to religious ethics and are thus rejected. To overcome this binary approach and contribute to a broader discussion necessary in the research on the relation between religion and technoscience, as well as to understand and account for the various and divergent phenomena we witness today, theology needs to embrace and advocate a methodological atheism for the research and development in both science and technology. Only on the basis of such a methodological atheism, as held by the German philosopher Hans-Dieter Mutschler, theology can both overcome its own binary approach to technosciences as well as pass serious criticism on any metaphysically charged scientific theories and technological accomplishments.

## 2. PROMETHEUS

### THE SYMBOLIC MEANING OF INNOVATION

Throughout literary history, Prometheus appears as an ambivalent figure. Greek mythology narrates that he stole the fire from Zeus and gave it to the humans. Prometheus introduced humanity to *techné* (*techne*) and taught humans how to use tools; in Greek mythology, Prometheus, human culture, and technology are closely connected. His gift to humanity, however, resulted in the punishment of both humans and Prometheus by Zeus. With the fall of the ancient Greek pantheon, the titan did not lose his significance. In the Promethean myth, fire stands at the beginning of technological development and, as a gift of the titan and a product of the gods, fire symbolically expresses its close relation to the transcendent. Many artists and writers, ranging from Hesiod (c. 700 BCE) up until the 20th century, have expressed this metaphysical or symbolic attribution in a powerful iconography or language. Mary Shelley, for example, subtitled her 1818 *Frankenstein* novel 'The Modern Prometheus' establishing the bridge between modern science and technology and the titan's rich and ambivalent history. Another example is the French philosopher Simone Weil who describes Prometheus' gift, its importance for human culture, and Prometheus' tragic destiny in her poem *Prométhée*: "Feu créateur, destructeur, flamme artiste! Feu, héritier des lueurs du couchant!"<sup>5</sup> (Weil 1995, 210).

The Promethean myth suggests that humanity has never perceived scientific and technological advancements as neutral but has always located them within a metaphysical or cosmological system. The close relation between human existence and self-understanding, scientific and technolo-

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<sup>5</sup> "Constructive, destructive fire, flame of art! Fire, inheritor of afterglow!" All translations are my own unless another translator is identified.

gical development, and cosmology (in a philosophical sense) might be one of the very reasons why the figure of Prometheus has survived millennia, standing for the human longing for venturing beyond frontiers, for the conquer of unknown territory, and for locating that very knowledge in a symbolic system trying to resignify and remake both the world and human action (Ricoeur 1984, 81).

The close relation between scientific and technological advancements and a religiously or philosophically informed cosmology (and thus the self-understanding of humans as well as their role in the world) expressed by the Promethean myth has influenced social theories on world-making processes. According to Jacques Ellul, for example, the Christian society that developed in the West from the fourth up until the fourteenth century lacked in resourcefulness, innovativeness, and inventive talent. Instead, scientific and technological advancements came from Eastern societies since, according to Ellul, the Christian “focus of interest was [...] on something other than the state and practical activity” (Ellul 1964, 34). Christianity was more concerned with apocalyptic scenarios and the world to come than worldly affairs (Ellul 1964, 37). Most important, according to Ellul, is the connection Christianity established between all human action and ethical and moral judgments. Every aspect of human life and human activity, including techn, was evaluated from a moral and ethical point of view.

*The question ‘Is it righteous?’ was asked of every attempt to change modes of production or of organization. That something might be useful or profitable to men did not make it right and just. It had to fit a precise conception of justice before God. When an element of technique appeared to be righteous from every point of view, it was adopted, but even then with excessive caution. Only inventions (representing a choice among techniques made by individuals versed in Greek or Latin) judged worthy were applied or even allowed to become known. It was within this narrow compass that certain monks propagated and improved technical instruments (Ellul 1964, 37).*

True technoscientific advancements (outside the influence of Arabic or Chinese culture) happened only after the fourteenth century and under the influence of the Reformation, the Renaissance, and the rise of humanism (Ellul 1964, 38).

Despite Ellul’s highly critical evaluation of technology,<sup>6</sup> he expresses a crucial factor in locating development within a weltanschauliches System

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<sup>6</sup> Ellul himself uses the word “technique” (Ellul 1964, 3f.) to express not only a technical or machinic dimension but the social and cultural effects of technological advancements as well.

(world-philosophical system) and the process of meaning making as well as assessing its moral, ethical, and religious values. In fact, the moral evaluation of progress (or what is considered progress) and its contribution to society were (and still are today) directly dependent on its value for a religious system. This evaluation as positive or negative contributes to a binary approach to science and technology because it is rooted in the conviction that scientific and technological progress is directly connected to religious belief, practice, and doctrine as well as a religiously motivated cosmology. Within this binary approach, religion and technoscience compete with each other, often at the expense of religious authorities. As they evaluate development and progress from a decidedly religious perspective, they can be approved of only if they fit into the specific religious world view.

### 3. "... WE END UP WITH TWO ALTERNATIVES"

*When God is subtracted, something doesn't add up for man, the world, the whole universe. So we end up with two alternatives. What came first? Creative Reason, the Creator Spirit who makes all things and gives them growth, or Unreason, which, lacking any meaning, yet somehow brings forth a mathematically ordered cosmos, as well as man and his reason. The latter, however, would then be nothing more than a chance result of evolution and thus, in the end, equally meaningless.*  
(Benedict XVI. 2006)

#### 3.1. THE CHURCH AND EVOLUTION

In many publications and official statements, the Roman Catholic Church, her representatives, or theologians were worried that scientific and technological ideas could undermine fundamental Christian doctrine and Christian morals. Their evaluation of scientific and technological discoveries is often based on a binary understanding of the relationship between religion and technoscience as well as a narrow and religiously informed understanding of the 'nature' or 'essence' of the human being.

Scientific discoveries and technological innovations are thought to have a direct impact on doctrine and faith and can only be approved of if they refer to a higher being or comply to specific and strict moral and ethical values. Otherwise, both are seen as atheistic, as a threat to religion and religious doctrine.

Examples of this binary understanding are manifold. In 1860, for example, the Provincial Council of Cologne declared:

*Primi parentes a Deo immediate conditi sunt. Itaque Scripturae sacrae fideique plane adversantem illorum declaramus sententiam, qui asserere non*

*verentur, spontanea naturae imperfectioris in perfectiorem continuo ultimoque humanam hanc immutatione hominem, si corpus quidem spectes, prodiisse*<sup>7</sup> (*Acta et Decreta 1862, tit. IV, c. XIV, 30*).

Because the council used the term “spontaneous,” O’Leary argues that it did not reject evolution itself, but an unguided or nonteleological understanding thereof. The declaration of 1860 had no major effect on the universal church; that is, the Church did not voice a dogmatic statement regarding this issue (O’Leary 2007, 47), but the statement is an example for the various attempts to safeguard Catholic doctrine and to retain a role for God in the universe. In the 19th century the Church also worried that other scientific, especially archeological, discoveries might undermine the authority of scripture and its historic and scientific propositions. In this controversy, the detailed account of creation in Genesis was often used as an argument for the accuracy of scripture and against modern theories (e.g. evolution) and discoveries (e.g. in archeology).

Under the pontificate of Pope John Paul II the relation between theology and technoscience became more relaxed. One of the many initiatives John Paul II took was Galileo’s rehabilitation as a symbol of the Church’s appreciation for scientific research and excellence. In his approach to science and technology the Pope emphasized the autonomy of these disciplines and stressed that they work according to their own methods and principles. John Paul II was right when he rejected any philosophical, ideological, and metaphysical arguments posited by scientists and philosophers contradicting the theological notion of God as the creator and origin of life as well as humans being created in the image of God (John Paul II 1996, § 4-5). Ultimately, however, John Paul II did not overcome the binary approach in his evaluation of natural sciences. In his message to the Pontifical Academy of Sciences, he poses the question how “conclusions reached by the various scientific disciplines coincide with those contained in the message of Revelation” (John Paul II 1996, § 2). His formulation suggests that there is a direct connection between theories of natural sciences and the doctrines of the Church – an implication he does not resolve but rather reinforces throughout his speech, e.g. when he states that the “Church’s Magisterium is directly concerned with the question of evolution, for it involves the conception of man” (John Paul II 1996, § 5). Similar to his predecessors, he

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<sup>7</sup> „Our first parents were immediately made by God. Hence, we declare openly opposed to Holy Scripture and to the Faith the opinion of those who go so far as to say that man, so far his body is concerned, was produced by the spontaneous transformation of the less perfect into the more perfect, successively, ultimately ending in the human.” Translation by Ernest C. Messinger (O’Leary 2007, 47).

mixed philosophical and scientific problems and made the approval to scientific discoveries dependent on their compatibility with Catholic doctrine:

*Consequently, theories of evolution which, in accordance with the philosophies inspiring them, consider the mind as emerging from the forces of living matter, or as a mere epiphenomenon of this matter, are incompatible with the truth about man. Nor are they able to ground the dignity of the person (John Paul II 1996, § 5).*

Drawing on Pius XII's critical remarks on evolution in his encyclical *Humani generis* (1950)<sup>8</sup>, John Paul II maintained a critical distance towards the theory of evolution. In particular, he pointed out what Pius XII already stressed: while evolution is the commonly accepted hypothesis in sciences, human "souls are immediately created by God" (Pius XII 1950, § 36; John Paul II 1996, § 3; O'Leary 2007, 190-207). Both popes, Pius XII and John Paul II, were particularly concerned with what they thought were the religious and theological implications of the theory of evolution and thus based their judgment on those implications. In his evaluation of John Paul II's stance towards science, O'Leary remarks that the "pope had, notwithstanding some outstanding difficulties, made peace with Galileo, but he did not completely come to terms with Darwin" (O'Leary 2007, 207) – not least because of religious implications and theological problems.

### 3.2. THE CHURCH AND TECHNOLOGY

Although the Church has had disputes with scientists, it has long advanced scientific progress through institutions like the Vatican Observatory, one of the world's oldest astronomical institutes. While the Church has been proactive in scientific endeavor, its recent approach to technoscience has mainly been limited to modern media and biotechnology. In its analysis of communication technology, the Church mainly utilizes two perspectives: media as pastoral means (i.e. how they can be used to spread the gospel and the message of the Church) and the ethical implications of mass media. "The mass media can and must promote justice and solidarity according to an organic and correct vision of human development, by reporting events

<sup>8</sup> Pius XII writes in *Humani generis*: "For these reasons the Teaching Authority of the Church does not forbid that, in conformity with the present state of human sciences and sacred theology, research and discussions, on the part of men experienced in both fields, take place with regard to the doctrine of evolution, in as far as it inquires into the origin of the human body as coming from pre-existent and living matter - for the Catholic faith obliges us to hold that souls are immediately created by God. However, this must be done in such a way that the reasons for both opinions, that is, those favorable and those unfavorable to evolution, be weighed and judged with the necessary seriousness, moderation and measure, and provided that all are prepared to submit to the judgment of the Church, to whom Christ has given the mission of interpreting authentically the Sacred Scriptures and of defending the dogmas of faith" (Pius XII 1950, §36).



accurately and truthfully, analyzing situations and problems completely, and providing a forum for different opinions" (John Paul II. 2005, §3). The Church's approach to biotechnology is guided by its understanding of human dignity and the Christian understanding of creation: "*The Christian vision of creation makes a positive judgment on the acceptability of human intervention in nature, which also includes other living beings, and at the same time makes a strong appeal for responsibility*" (PCJP 2004, § 473). Based on the conviction that human beings are created in the image of God<sup>9</sup>, John Paul II opposed embryonic stem cell research (but supported the search for alternatives to embryonic stem cells) as well as any research that violates the respect for the human person as understood by the Catholic Church. The Church has a more relaxed position on the use of biotechnology for the fight against hunger, and calls for a thorough scientific and ethical examination of the chances and risks of genetically modified foods (Marchetto 2000). But even if the Church might come to a positive evaluation of genetically modified organisms in the fight against hunger, the *Compendium of the Social Doctrine of the Church* establishes a direct relation between biotechnology and the religious realm: "For believers, it is a question of a gift [living and inanimate material] received from the Creator and entrusted to human intelligence and freedom, which are themselves also gifts from heaven" (PCJP 2004, § 477).

This relation established between technosciences and religion has also influenced the instruction *Dignitas Personae* (CDF 2008) released in December 2008, in which the Catholic Church commented on some ethical questions of biotechnological and biomedical research on humans, in particular issues of reproduction and stem cell research. The document states that the Catholic Church relies on "*the light both of reason and faith*" (CDF 2008, § 3) for its argument and "*considers science an invaluable service to the integral good of the life and dignity of every human being*" (CDF 2008, § 3). The crucial criteria, however, applied throughout the text for the evaluation of the ethical value and the permissibility of biotechnological research heavily rely on an understanding of natural law that is based on the Christian belief system (CDF 2008, §5f.). Those criteria are that sexual intercourse and reproduction are not to be separated and that any medical intervention happens only for therapeutic purposes, i.e. to "overcome or correct pathologies [...] [to re-establish] the normal functioning of human procreation" (CDF 2008, §4). Other arguments, e.g. against genetic modifications, as discussed in philosophy

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<sup>9</sup> John Paul II refers to the pastoral constitution *Gaudium et spes* of the Second Vatican Council which states that "man [...] is the only creature on earth which God willed for itself" (*Gaudium et spes* 1965, § 24).

for example, only play a minor role (CDF 2008, § 26f.). Habermas, for example, is critical of genetic engineering of offspring because of the blurring of boundaries of persons and objects and thus the intrusion into the ethical freedom of another person (Habermas 2001, 29f.).

The view that biotechnology is only licit as therapeutic measure is also challenged by Karl Rahner. His approach to human self-manipulation (and eventually to technoscience in general) is very pragmatic – and from a theological perspective very ‘humble’ – in that he posits that self-manipulation is first and foremost a question of the technosciences, i.e. technology, biology, medical sciences, as well as sociology, and political sciences. That does not mean that theology is not or should not be concerned with human self-design. Quite on the contrary there is no question for Rahner about the theological relevance of self-manipulation because it impacts the whole of the human being – the very human being and its ultimate goal theology deals with. Any theological contribution, however, has to consider the problems, questions, and answers of the technosciences<sup>10</sup> (Rahner 1966, 45f.).

Rahner stresses that any theological reflection – and thus any moral theological judgment – has to consider that self-design and self-manipulation have been an essential part of human history. In fact, it is part of his understanding of the human being that humans form, design, manipulate and thus transcend themselves. “Der Mensch ist grundsätzlich operabel und darf es sein” (Rahner 1966, 52). Rahner warns against a religious-moralistic understanding of the concept of ‘nature’ and the ‘essence’ of human beings. He identifies a tendency in the tradition of moral theology to understand human traits and characteristics as essential to human ‘nature’ which are in fact contextual, historic, and non-fundamental (Rahner 1966, 52-60). This is not to say that Rahner represents an ‘anything goes’ ideology. He explicitly states that is the task of theology to remind humanity that there might be decisions we make that are irreversible, decisions that not only affect the individual, but all of humanity and future generations.

While Rahner embraces human and technological development and progress as well as our longing to transcend ourselves – being aware that there might be irreversible decisions that could lead to a collective (technological or biomedical) suicide –, his approach is not without difficulties. Similarly to the document’s *Dignitas Personae* rejection of biotechnology but for therapeutic reasons because of a natural law concept that is founded in faith, Rahner’s appreciation of human self-manipulation is grounded in his belief

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<sup>10</sup> “The human being is inherently operable and is allowed to be so.”

in the vocation of human beings to transcend themselves, not only spiritually but ultimately bodily as well (Rahner 1966, 55f.).<sup>11</sup>

Besides the work of Karl Rahner and a few other examples, such as Romano Guardini and Pierre Teilhard de Chardin, technology in its very broad understanding as *tecnh*, has largely been neglected by the Church as well as by (Catholic) theology. Approaches to the relationship between technoscience and theology that exist today focus mainly on an “eschatological ambiguity regarding technology” (Padgett 2005, 581), or the question “How committed should theologians should [sic] be to ‘new’ or ‘rogue’ scientific discoveries? For some, attaching one’s theology to ‘unestablished’ science comes with potential devastation. [...] Theologians and religious scholars need to occupy a position of prominence in the track of new scientific research and discoveries” (Haag 2007, 817). The problem with such attempts is that the role ‘granted’ to God in the universe, i.e. how and at what level he is ‘allowed’ to interact with his creation, is dependent on the status of scientific discoveries. The problem of trying to locate God’s action within a scientific framework is an imminent one today, e.g. when theologians try to trace God’s action to a quantum level or try to ascribe science a constructive role in creational theology.<sup>12</sup> These approaches are highly problematic because technoscientific exploration is an ever open process. They are ‘bad theology’ because they try to locate God’s interaction with creation at some random and arbitrary level thus leading to a *Verdinglichung* (reification) of God. Proponents of this approach think they need to pinpoint to an ‘interface’ between God and creation in order to be able to affirm divine providence instead of a creator God as deistic entity. Ultimately, however, they are a desperate attempt to ‘attach’ theology and religious doctrine to science or technology. This attempt is desperate because it cannot account for the autonomy of academic disciplines and their different *Fragehorizonte* (horizons of inquiry), or for the philosophical and ethical discourses within and between different disciplines. Therefore, a theological engagement with science (and vice versa) has to happen on a philosophical level, i.e. with philosophy as mediator, and with a distinct, well-founded, and comprehensible methodology. Any other attempts to bring theology and technology together risk accepting the binary approach that evaluates innovations and discoveries from a dogmatic point of view and bases any approval or rejection

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<sup>11</sup> Cole-Turner has worked extensively on the evaluation of possibilities in biotechnology by religious communities, cf. Cole-Turner 2005; cf. also his recently edited volume Cole-Turner 2008.

<sup>12</sup> There are quite a few authors that try to use the quantum model as basis for the possibility of God’s interaction with his creation, e.g. Tune, Anders S., *Quantum Theory and the Resurrection of Jesus*, in: *Dialogue: A Journal of Theology*, vol. 43, no. 3, Fall 2004, pp. 166-176.

on their consistency with religious world views and articles of faith. Moreover, an unmediated discourse might further the tendency to use scientific findings for theological thinking.

Many theological approaches to technology address the nature of technology, i.e. whether technology now and then is essentially the same or not. The philosopher Jay Newman argues that many (religious) critics of technology share the notion that today's technology is different from traditional or ancient technology, not only quantitatively but also qualitatively (Newman 1997, 20f.). In *The Technological Society*, Ellul, for example, deals with the differences between traditional and new technology and draws the line between 'old' and 'new' at the 18th century. For Ellul, today's technology (starting with the 18th/19th century) possesses new characteristics such as technical universalism, i.e. the global effect and spread of technological innovations and principles (Ellul 1964, 77-147). Another characteristic, according to Ellul, is the autonomy of technological progress from external influences such as politics or economy, moral judgments and spiritual values (Ellul 1964, 133f.). In contrast to Ellul's assessment, technology is in fact part of sociocultural practices and intertwined with politics, economy, religion, and society on many different levels. His last point, however, that there is a relationship between technology, morality, and spirituality, is especially important. Ellul claims that through the autonomy of modern technology "technique [is] at once sacrilegious and sacred"<sup>13</sup> (Ellul 1964, 141). Human beings try to make sense of the world they live in. This meaning making process often goes beyond the material world into the 'spiritual', magical, or mysterious sphere. Modern technology, however, demonstrates that the spiritual or mysterious realm does not exist because it reduces everything to a technical operation and does not need or is dependent on the mysterious.<sup>14</sup> "The mysterious is merely that which has not yet been technicized" (Ellul 1964, 142). Since human beings, however, cannot live without a sense of the sacred or mysterious, they bestow technology with a sacred aura.<sup>15</sup> Thus, technology becomes the *locus* of the encounter with the sacred as well as the place where meaning making, at least on a superficial level, happens.

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<sup>13</sup> Ellul himself points out that he does not understand 'sacrilegious' from a religious or theological perspective but from a sociological one (Ellul 1964, 141).

<sup>14</sup> For the impact of technology and science on the *Weltbild* (world view) cf. Also Martin Heidegger's *Die Zeit des Weltbildes* (*The Age of the World Picture*) (Heidegger 1950, 69-104).

<sup>15</sup> Manuel Castells, for example, has elaborated on the term 'network society' (Castells 1999). He argues that information technology is a central paradigm to the transformation and re-configurations processes shaping today's societies.

#### 4. ATHEISTIC SCIENCE AND TECHNOLOGY

In order for theology to keep up with current developments and not exclude itself from social cultural, scientific, and technological discourses – i.e. to be a valuable and serious participant in social discourse – it needs to overcome the binary trap. This is not an easy undertaking since theology, religion, technology, science, and society are intertwined with and in opposition to each other on many different levels. Technoscience and religion, for example, are not just more or less important aspects of culture and society, but are among the fundamental characteristics of human life. Human culture, history, and progress include a history of technological innovations leading to a society that is immersed in technology. Characterizations of our society as *network society*, for example, express this fundamental importance of technology, and communication technology in particular. Thus, a theological evaluation of technology cannot exclusively consist of an analysis of a single form of technology, such as mass media in *The Rapid Development* (John Paul II 2005) or moral theological statements on stem cell research and genetic engineering. In contrast to John Paul II's conviction that science and technology depend on the moral input of religion and theology (O'Leary 2007, 196), it is important to appreciate the technological context as a whole and consult philosophy as a mediator between the disciplines. This mediating role of philosophy is vital because theology and technoscience operate on different levels with different premises, questions, methods, and motivations. While the language and symbol system used in religion is often plurivalent and needs to be interpreted, e.g. by an institution, science often operates with probabilities and strives for unambiguous explanations (Mutschler 2008d; Blondel 1974, 109).<sup>16</sup> Both theology and science base their explorations on experience (among other factors), but their methods, questions, and aims are different. Religious experiences, for example have usually been the domain of theology. Modern science, however, e.g. neuroscience, occasionally examines religious experiences on a purely scientific basis, such as the observation of the brain and its processes during religious practices.

A mediator, such as philosophy, is necessary to translate between the different language systems, methodological approaches, and horizons of inquiry. In fact, it is very problematic to set theology and technoscience in a direct relation without such a mediator – both from a theological as well as a scientific point of view. When establishing a relation without a mediat-

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<sup>16</sup> In his compendium of Catholic dogmatic theology, the German bishop and former professor of dogmatic theology at Munich University, Gerhard Ludwig Müller, holds a similar view (Müller 2003,171).

or, both disciplines would go beyond their boundaries, construct a cosmology and impose their ideological and/or metaphysically charged construct on each other, such as in the case of physicalism. Similarly, Pius XII welcomed the big bang theory because it allowed for an active act of creation, thereby metaphysically charging scientific hypotheses.<sup>17</sup> Like theologians, technoscientists also occasionally conflate religious and scientific language. Stephen Hawking set out to construct his own cosmology and draw an image of a higher being – or better, reject a Christian understanding of God – in *A Brief History of Time* (Hawking 1988) based on his understanding of the universe and its origins (Mutschler 2008c). The binary trap, on both sides, can only be overcome with the help of a mediator such as philosophy. In human life, the quest for meaning is a central one. Even physicalists whose program is to explain everything from a scientific perspective tend to end up in trying to make sense of a universe otherwise devoid of meaning (Mutschler 1999). Similarly, artificial intelligence researchers and roboticists link their research with promises and hopes of a paradise to come.<sup>18</sup> In this context, philosophy could build a bridge between sciences that neither provide nor exclude meaning (Mutschler 2008e) and religion as a possible source of meaning without making theological insights and doctrine dependent on technoscientific findings.

Looking at the historic developments and ‘facts’, however, it seems obvious that, as science and technology advanced, both areas came into a stark opposition and a separation between them (often to the disadvantage of religion) is the only logical and necessary implication of modern developments and innovations. Many discoveries have in fact challenged theological reasoning and religious cosmology of their respective age, such as heliocentrism or the impact of technology on Christian anthropology and the understanding of ‘the’ human nature. An antithetic understanding of religion and technoscience, however, is neither helpful nor accurate, as throughout their controversial history they have mutually informed each other. Religious systems have often served as source of scientific knowledge or inspiration while technoscientists have drawn on religious and theological symbols and language (Brooke 1991, 31-34), which they still do (Geraci 2007). For example, when presenting new discoveries, technoscientists have often

<sup>17</sup> Robert Jastrow, founding director of the NASA Goddard Institute for Space Studies at Columbia University, makes a similar, though agnostic comparison. He claims that scientific (and in particular astronomic) evidence can lead to a religious world view (Jastrow 1992, 14; 89-96; 103-107).

<sup>18</sup> The philosopher Jutta Weber argues that publications on information and communication technology often draw on human longing, the desire to make dreams come true and they often promise a better world to come. This terminology can, according to Weber, be found across different genres: popular science, self-representations of research communities, research proposals, etc. (Weber 2007).

drawn on religious language and interpreted new findings as a way to discern the divine will, disclose or reject a final cause, sketch some sort of divine design of the material world, or as an expression of divine omnipotence: a clockwork universe, for example, expressed divine design, or the understanding that an infinite God could only have created an infinite universe (Brooke 1991, 56; 72-81; 31). In this context, Brooke speaks of scientists establishing an "alternative religion" or "counterreligion" (Brooke 1991, 31) particularly in the 18th and 19th century; it is not surprising that the Church rejected some of the religious and theological claims presented alongside scientific and technological innovations, and often with them the innovations, too. On the other hand, religious reasoning and claims of faith were a crucial factor in limiting the development of scientific theories and hypotheses, particularly in the 16th and 17th century. Admissible scientific thought had to comply with religious ideas, not only with those of the Church but also with those of scientists. Further, sciences, such as mathematics and astronomy, were often instrumentalized and their purpose was seen in fostering the understanding of Scriptures and divine revelation (Brooke 1991, 57-59).

Scientific and theological reasoning often intertwined and interacted on many different levels. This was the case, for example, with Giordano Bruno, whose ideas were criticized by fellow scientists and theologians alike, with Kepler, who was convinced of a close relationship between creation, creator, and geometry, and with Galileo, who drew on the Church fathers in defense of his cosmology (Westfall 1986, 221; Brooke 1991, 39; 98).

Twentieth century physicists Max Planck or Carl Friedrich von Weizsäcker also wedded scientific discoveries to religious insights. Planck was committed to the idea that religion and science are closely related because they have a common goal and a common quest for truth: "Hin zu Gott"<sup>19</sup> (Planck 1965, 333). Both religion and science share the common conviction that there is a higher power governing the cosmos; what governs the universe and the higher being called 'god' by religions, are ultimately the same. For Planck, the difference between the two was that religion sees God as the beginning of everything, science sees God at the end of reasoning. Planck rejected any notions that saw contradictions between the two disciplines. Instead, he argued that science and religion complement each other and are mutually dependent (Planck 1965, 332; Mutschler 2005, 19-21) Carl Friedrich von Weizsäcker's philosophical approaches point in a similar direction. According to Mutschler, von Weizsäcker's religious interpretation of physics

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<sup>19</sup> "Towards God."

can even be called a physical argument for the existence of God (Mutschler 2005, 29). Instead of challenging such approaches, theologians often welcome such metaphysical endeavors of scientists because they interpret them as an absolutely essential return of sciences to an awareness of a higher power or as a potential bridge between the disciplines.<sup>20</sup>

Many explorations into the religious, philosophical, or cosmological realm presented by technoscientists, however, are very problematic. In such explorations, scientists and researchers in technology often recapitulate the binary logic of affirmation or denial of the existence of a higher being or articles of faith based on scientific discoveries. Doing so, they fail to define and differentiate the different methodological approaches to the respective problems. For example, they reject any metaphysical claims or anthropomorphic characterizations of our environment while at the same time using the very same language they reject. The physicist Bernulf Kanitscheider, for instance, welcomes the demythologization and demetaphysization of the cosmos and rejects the idea that any exceptional role could be ascribed to humanity (Mutschler 2002, 85-88). Yet, he characterizes the universe in very human, almost religious terms as, for example, in the title of his book *Von der mechanistischen Welt zum kreativen Universum* (Kanitscheider 1993), and of a chapter in that book called "Das schöpferische Universum – Vom Chaos zum Bewußtsein"<sup>21</sup> (Kanitscheider 1993, 158).

In its evaluation of both technoscience as well as (metaphysical or philosophical) comments on cosmology by scientists, today, theology must appreciate science's and technology's autonomy and understand what is expressed by such a position: it is not possible to deduce either atheistic or theistic convictions from scientific discoveries and technological innovations; with regards to the God-question, science and technology are – or ought to be – impartial. Whenever this is not the case, whenever technoscientists endeavor to deduce meaning or metaphysical claims from their research, theologians can and ought to criticize a scientific and technological cosmology. It is thus the task of theology to promote an attitude of 'religious humility' within its own discipline as well as among believers and (religious) scientists. 'Religious humility' in this context refers to the old and important tradition in theological reasoning of methodologically excluding the revelation in favor of reliance on reason alone to demonstrate the rationality and reasonability of faith. As an important representative of this tradi-

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<sup>20</sup> For a more detailed analysis of the problem cf. Mutschler, *Chaostheorie und Theologie*. An example of a theologian welcoming metaphysical endeavors of scientists cf. e.g. Ganoczy, *Chaos – Zufall – Schöpfungsglaube*.

<sup>21</sup> "The Creative Universe – From Chaos to Consciousness". Note that the German word 'schöpferisch' strongly associates creation and the creator God.



tion, Anselm of Canterbury states in the beginning of *Cur deus homo* that he would elaborate on the Christian mystery of incarnation and salvation without drawing on God's revelation through Jesus – *remoto Christo* (Anselm 1956, 100). Similarly, Mutschler argues that faith has to exercise restraint in the research in and the discourse with natural sciences – and it is important to add technology as well. “Zwar bin ich selbst überzeugter Christ, aber mir scheint, daß gerade der, der eine solche Überzeugung teilt, imstande sein muß, sie möglichst lange zu suspendieren und zwar gerade um des Glaubens willen”<sup>22</sup> (Mutschler 1998, 221). Mutschler's goal is not to prove the existence of God with scientific means; instead he recognizes that a (self-)responsible faith would always also want to answer to reason. What Mutschler aims for is – while not similar in the point of departure or the aim – comparable to Maurice Blondel's philosophical approach to faith. Blondel tries to show the rationality of faith not from within theology or with theological methods, but from within philosophy, not for a theological audience but for a secular one. His point of departure is his faith but for the sake of faith – to pick up Mutschler's words – he suspends his belief (faith itself is a gift for Blondel) to discern the truth of the Christian faith in a philosophically comprehensible way (Verweyen 1974). Mutschler's approach is similar. By suspending his belief and assuming the ‘neutrality’ of science, he arrives at the insight that the search for meaning never disappears – not even within the sciences (Mutschler 1999). It is this persistence of meaning and its philosophical reflection that could be a link to further theological inquiry.

We theologians must support scientists in their search for exclusively naturalistic causes and explanations. Further, theology has to allow room for the discussion of the ethical challenges and the impact of technological developments on the human nature (or the understanding thereof) first and foremost within the respective disciplines. This atheistic approach must not be understood as science and technology leading to atheism or as deterioration of religion, but as a methodological approach – or what can be called methodological atheism. Scientists do not need a higher being to validate their hypotheses. In order to guarantee scientific, empirical, and methodologically reproducible results, science necessarily has to leave God out of the equation (Mutschler 2008d; Mutschler 1999). Blondel takes a similar stance when he rejects any philosophical systems and theories that rely on scientific data or parameters. Similarly, any apologetic approach to theology that bases its cosmology on scientific data and theories or the status of techno-

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<sup>22</sup> “While I am a practicing Christian, I think that especially those who hold the same convictions and beliefs have to be able to suspend their beliefs as long as possible for the sake of faith.”

logy will ultimately fail because it is neither technoscience's task nor competence to provide data and theories to theology or philosophy (Blondel 1974, 108-111).

Religious people often misunderstand methodological atheism as being opposed to religion because boundaries between disciplines are often blurred and technoscientists, theologians, and politicians cross the lines between the disciplines. In 2000, for example, when the Human Genome Project presented its first results, Bill Clinton announced, "Today, we are learning the language in which God created life. We are gaining ever more awe for the complexity, the beauty, the wonder of God's most divine and sacred gift" (Clinton 2000). While Clinton is not a scientist, what he expressed in his statement is symptomatic of the blurring of scientific and empirical research and hermeneutics or ideological interpretation of scientific theories and hypotheses, as well as the use of religious language to describe scientific achievements.

What has been said so far – that progress, innovation, and discoveries do not lead to a deterioration of religion – holds true for both science and technology. However, the relation between technology and theology requires some distinct considerations for two reasons. First, technology – or more generally *tecnh* – is one of the basic characteristics of our society. It is not 'just' a tool one can use on a more or less regular basis or ignore at all but a *Grundbestimmung* (basic disposition) – among others – of human action and human existence. There are, of course, tendencies to take a break from technology, in particular communication technology (Bittman 2008). Yet, technology is a fundamental part of our everyday life, of our society, our culture, and probably of ourselves. Second, technology, or *tecnh*, the active shaping of our environment, is part of human identity and existence. Insofar as technology and science form our environment and change world-views, they shape those who live in this environment and ultimately pose the question of meaning that necessitates philosophical, ethical, and theological reflection as well as ethical considerations and decisions that are – ultimately – often informed by religious world views.

The concept of methodological atheism is highly relevant not only for the relation between natural sciences and theology, but also for the relation between technology and theology. Technology itself is neither secular nor opposed to religion; instead, religious ideas infuse modern technology. This was transparently obvious in the 1980s and 1990s, when the Internet became widespread and Virtual Reality became more popular among technoscientists. Often, it was religious ideas, e.g. hopes and promises of salvation,

that drove technological developments in the Internet and cybernetics (Mutschler 1998, 8; Heim 2000; Talbott 2000). The religious hype around technology is still visible today, such as in the pilgrimages of Apple worshippers to Apple stores upon the launch of a new product or in the aesthetics and staging of Apple product presentations (Müller 2007). These religious ideas that establish a relation between technology and religion are based on the understanding of technology as imitating nature and they contribute to the idea of a design in nature, catering to those who support notions like intelligent design or creationism, both in theology and the sciences (Mutschler 2008b). Theology as reasoning about God, as *fides quaerens intellectum*, necessarily has to question any promises of salvation present in society. The methodological atheism can serve as a useful concept to both critique such promises and strengthen the awareness that any theological evaluation of technology, however, has to consider the characteristics of technology as well as its fundamental role in human culture.

Human action as *tecnh* or technological action is symbolic action and communication. Therefore, technology is not a mere tool or gadget of little, no, or just a 'literal' meaning. It serves as a plurivalent symbol and cannot be directly understood but has to be interpreted (Ricoeur 1988, 17-26; Ricoeur 1996, 16-36). Thus, technology is a means to mediate meaning and values as well as messages about the individual, human beings, and the world we live in. Technology is highly symbolic and 'meaningful' and it shapes the environment in which the presentation and representation of the self and the world takes places and is enacted. Meaningful and meaning-making narratives are today – if not since the beginning of human art and human culture – told with the help of technology and within a technological context. Human beings shape their environment with the help of technology expressing their self-understanding as well as the understanding of their relationship with the other and with the world. In turn, meaning, life, the world, and what it means to be human is interpreted within a technologically modified context.

Despite the infusion of technology with religious ideas, it is vital to point out that technology is not necessarily antireligious nor does it necessarily lead to atheism. Instead, according to Mutschler, any understanding of technology as being opposed to religion is rooted in a misunderstanding and a dogmatization of technology (and science respectively), as in a theory of everything, a desire to master everything with the help of technology, or the aspiration to achieve god-like status through technological innovations and modifications to the human being. Only too narrow an understanding of

technology that perceives it as a mere tool with a predefined *telos* suggests that technology and religion are in stark opposition (Mutschler 1998, 36-41).

## 5. A THEOLOGY OF TECHNOLOGY?

How can theology contribute to a discourse on technology in a 'technological society'? Can theology contribute at all without falling into the trap of a binary – and thus inadequate – evaluation of technology? I am not claiming that I could offer a manual for theology about how to approach technology. What I want to do is point out what to avoid and which questions might be relevant to consider for a fruitful dialogue between theology and science and technology in particular.

One of the biggest obstacles for such a dialogue is that there are only a few theologians writing about technology, most of them with a rather pessimistic approach to technology or a focus on the ethical problems of technology. Further, many theologians often lack the expertise to comment on technology (Rahner 1966, 45f.). As Mutschler points out, a theological approach to technology that focuses almost exclusively on these ethical implications is problematic for two reasons. Christian Ethics, as the question of the good life and the reasoning about the *summum bonum* from a specific Christian perspective, is of course an important subarea of theology. Mutschler, however, argues that the ethical implications of technology are not specific theological problems and that theologians usually do not have the necessary qualifications or a prior specialized knowledge to evaluate those challenges (Mutschler 1998, 215-219).

*Wenn es um Probleme der Technik geht und wenn Theologen sich dazu äußern (was gar nicht so oft der Fall ist), dann sprechen sie in der Regel von den ethischen Problemen der Technik. Aber das sind keine spezifisch theologischen Probleme, sondern solche, die sich jedem denkenden Menschen aufdrängen. Es sind weiterhin solche Fragestellungen, bei denen der Theologe keine besondere Kompetenz für sich in Anspruch nehmen kann<sup>23</sup> (Mutschler 1998, 216f.).*

I agree with Mutschler's pointedly disillusioned analysis because there is a tendency in theology to jump to ethical judgments without an adequate analysis of technological innovations in their socio-cultural context. An adequate analysis would have to consider the different approaches and meth-

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<sup>23</sup> "When it comes to the problems of technique and when theologians deal with such problems (which does not happen all too often), then they usually talk about the *ethical* problems of technique. However, those are not problems specific to theology but problems that impose themselves on every thinking human being. Further, those are questions for which a theologian cannot claim a particular expertise."

ods from sociology and cultural studies and preferably cooperate with an institute of technological impact assessment. Further, any approach should venture from a methodological atheism, take the autonomy of the disciplines seriously, and necessarily involve philosophy as mediator between theology and technoscience.<sup>24</sup> Rather than pointing towards ethical challenges, theology needs to find allies and dialogue partners for the questions ‘how do we understand ourselves, especially in relation to technology?’, ‘what do we want our future to be?’ Such allies could be found in prominent figures in science and technology who do not impose a religious ideology on progress and innovation, but deal with the question of what we want our society to be, e.g. the recently deceased Joseph Weizenbaum.<sup>25</sup> Most importantly, as Stephan van Erp recently pointed out,<sup>26</sup> theology has to take ethical and meaning-making questions that emerge within a scientific and technological context seriously. The aim of such an analysis is not to derive naturalistic arguments for the existence of God but to overcome the binary trap and to allow room for a discourse that evolves from human experience and interaction instead of imposing religious and moral values from an outsider, i.e. a theological and non-technoscientific, perspective.

The 20th century Catholic theologian Romano Guardini describes a more ‘relaxed’ relationship between theology and technology. Even though Guardini struggles with modern developments and his approach needs to be reread against today’s insight that society and technology are interrelated and interdependent, his thoughts are valuable for theology because he calls for an active engagement with technology. In his *Letters from Lake Como*, Guardini critically and at times highly skeptically evaluates the process of “*Entwirklichung*” caused by technological innovation (Guardini 1981, 18). Guardini understands *Entwirklichung* as a process of estrangement between human beings and nature as well as the dissolution of harmony that existed between nature and what human tech brought forth up until approximately the 19th century (Guardini 1981, 70). He also points out that developments in science and technology might diminish humankind’s capacity for immediate religious experience insofar as science and technology

<sup>24</sup> As Rahner points out, any question that deals with humanity is always also a theological question (Rahner 1966, 45). This view, however, does not contradict the autonomy of the disciplines.

<sup>25</sup> Joseph Weizenbaum, a pioneer in the artificial intelligence research, advocated a rational and critical use of technology and criticized its mystification (Weizenbaum 1980, 334). As an expert in computer science, he raised the question of what it means to be a human person in a technological and machinic environment – a question which is at the very heart of theological reasoning.

<sup>26</sup> Cf. Stephan van Erp’s presentation at the conference of the European Society for Catholic Theology, Leuven/Belgium September 2007 at the panel *The Ghost in the Machine? The Challenge of Technological Universities for Theology in Europe*.

might distract from one's attention from existential questions that are not their subject matter (Guardini 1982, 93f.).

Guardini's rather skeptical understanding, however, does not lead him to resignation or technological or socio-cultural pessimism. Instead, he points out that the transformations of society and culture caused by technological developments demand a new way of relating humanity and environment, different cultures and societies (Guardini 1981, 38f.). According to Guardini, many people (and he includes himself) have an ambivalent feeling about innovations because they are often understood and interpreted from our past, from a traditional understanding of our world and ourselves. People often see innovations as something dangerous or destructive because advancements emerge and confront these traditional ideas and because often human beings are not yet ready for some of the transformations caused by technology, which leads to a feeling of desperation and helplessness. According to Guardini, it is our task to creatively and actively shape what is to come, and the only chance to do so is to accept and affirm change but be aware of what might be destructive and inhuman. "Das ganze technische Geschehen, die losgebrochenen Kräfte können nur durch eine neue menschliche Haltung gemeistert werden, die ihnen zugeordnet ist. [...] Nicht uns gegen das Neue stemmen und eine schöne Welt bewahren suchen, die untergehen muß. [...] Wir haben das Werden umzuformen"<sup>27</sup> (Guardini 1981, 73). Guardini clearly states that neither technology nor science is antichristian, antireligious or 'evil'. In fact, he argues that only the self-understanding of the human being as being related to a higher being and connected to another reality, being 'in the world but not of the world', enables human beings to detach themselves from nature and their natural environment (Guardini 1981, 74f.) and to remodel nature into culture (Guardini 1981, 92).

The theological 'surplus' of Guardini's reflections can be found in his appeal for an active engagement with development and progress and his reference to human will actively shaping the future.<sup>28</sup> Further, and most im-

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<sup>27</sup> "All the technological events, all the powers broken lose, can only be dealt with through a new human attitude that relates to them. [...] We should not try to stem against the new and preserve a beautiful world that has to perish. [...] We have to form and shape the becoming."

<sup>28</sup> In the history of Catholic theology, there have always been prominent theologians who emphasized that there is no contradiction between scientific knowledge and faith and who were aware that theology and technosciences deal with questions on different levels. In the 15th century, for example, Nicholas of Cusa argued in the context of the debate on heliocentrism that the unique and distinctive place of humanity in creation theology did not depend on a specific location of the earth or its relation to the sun but in its "ability to cultivate a state of learned ignorance. True wisdom recognized the limitations of knowledge. The mental powers, which made that spiritual quest possible, were the fount of human uniqueness – not a cosmic position" (Brooke 1991, 88).

portantly, in an ever changing technological and cultural context, the role and the meaning of religion and religious identity are not static but always have to be reconsidered. Ultimately, no matter what progress future might bring, faith is and will always be a venture and a matter of trust (Guardini 1981, 93f.).

Promoting the notion of a methodological atheism for technoscientific research helps theology uncover and appreciate its own more pragmatic and open approaches to those disciplines. Further, a methodological atheism can help the disciplines reflect on their own aims and limits. Only then can a fruitful discourse between theology and technoscience take place. Because these disciplines deal with different phenomena and problems, such a discourse will have to happen on a philosophical level. Promoting the awareness among theologians (as well as 'technoscientists') that a methodological atheism is necessary in natural sciences and technology, might then, one day, spare us the relentless debates over whether or not to teach evolution in schools and over whether or not scientific knowledge and technological development might lead to an anti- or areligious society.

Though faith in the Greek pantheon has almost entirely vanished from the religious landscape, Prometheus and that what he represents continue to haunt scientists and theologians as they consider our natural inclination to expand the borders of our knowledge and experience. For the future of the dialogue between theology, science and technology we can learn from the Promethean myth that technology is a vital and often highly symbolic part of our culture. As such, technology is not antireligious but possesses whatever symbolic meaning we attach to it. The Promethean myth further suggests that the quest for meaning and the reflection on the 'why of the how' are cornerstones of human existence.

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