

AN HISTORICAL PERSPECTIVE ON THE RELATIONSHIP BETWEEN SCIENCE AND RELIGION

[conference 'Distinguishing Science and Metaphysics in Evolution and Religion'; Lorentz Center, Leiden; August 27-31, 2018; contribution on August 27, 1.30 – 2 PM]

→Hand-out, followed by the lecture itself and by the Table of Contents of 'Unsettling Knowledge'

- three comprehensive theses about the history of the science/ religion relation:
  - **conflict** (Thomas Huxley in 1861; also, in 1896, Andrew Dickson White, *A History of the Warfare of Science With Theology in Christendom*)
  - **no overlap** (Stephen Jay Gould in *Rocks of Ages. Science and Religion in the Fullness of Life*; 1999)
  - **complexity** (certain historians of science and religion, inspired by John Hedley Brooke, *Science and Religion. Some Historical Perspectives*; 1991)
- why I reject all three theses
- **thinkers in a field of tension** (as discussed in my *Het knagende weten* ('Unsettling Knowledge: Kepler to Einstein in Eleven Written Portraits'))
  - tension as one major effect of 17<sup>th</sup> century Scientific Revolution
  - some pertinent issues:
    - literal or non-literal interpretation of God's revealed Word
    - the limits (if any) of ecclesiastical authority
    - a world of nothing but matter
    - the immortality of the soul
    - the distinction between human and animal
    - the place of humankind in an unbounded universe
    - what God has still to do after the Creation of a universe in which everything proceeds according to immutable natural laws?
    - the age of the universe
    - the origin of species and the descent of man
    - does it makes sense to speak of purposiveness in nature, and if so, how?
- **tension variously experienced over time** by variety of scholars concerned with such issues; here selected:
  - **Galileo:**
    - takes initiative on Earth moving (1613-1616); agreement on rules for biblical exegesis
    - why, then, a conflict, and how did it run out of hand?
    - outcome of analysis on shorter (1613-1633) vs. longer term
  - **Pascal:**
    - proof of truth of Christian religion not in orderliness of God's Creation but in revelation alone
    - strict methodical separation between mathematics, physics, and theology
  - **Newton:**
    - Excursion: Dawkins' seven words on Newton (*The God Delusion*, p. 124)
    - Noah's rational Ur-religion; a rescue operation
  - **Darwin's** agnosticism: what it variously meant to him
- my own stance on religion and on science (+ why mentioned at all)
- a selection of **three broad trends**:
  - standpoints meanwhile abandoned; shift in prestige from religion to science
  - Christ on His way out
  - decreasing dedication, decreasing rigor.

H. Floris Cohen

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How to conceive of the long drawn-out history of the relation between science and religion? There are, of course, many individual facts to relate and stories to tell, but facts and stories can get you only so far; is it possible to come up with some general truths about their problematic relationship?

The most ambitious in this regard are three comprehensive theses, each meant to cover the entire history of the relationship between science and religion in one fell swoop: the conflict thesis, the overlap thesis, and the complexity thesis.

The conflict thesis, also known as the warfare thesis, has first been phrased in 1861 by Thomas Huxley, well-known as Darwin's bulldog. He did so in a review of *The Origin of Species*, as follows:

Who shall number the patient and earnest seekers after truth from the days of Galileo until now, whose lives have been embittered and their good name blasted by the mistaken zeal of Bibliolaters? ... It is true that if philosophers have suffered, their cause has been amply avenged. Extinguished theologians lie about the cradle of every science as the strangled snakes beside that of Hercules, and history records that whenever science and dogmatism have been fairly opposed, the latter has been forced to retire from the lists, bleeding and crushed, if not annihilated; scotched if not slain.

This eloquently phrased vision of ceaseless conflict, unhesitating in its pointing out who have always been the good guys and who the bad guys, has since been taken up and, as it were, enshrined in 1896 in a bestselling book by Andrew Dickson White, then President of Cornell University.

Then there is Stephen Jay Gould's NOMA thesis, according to which science and religion form two separate 'magisteria', adjacent to one another and therefore without overlap. In his view, religion is entitled to wield 'teaching authority' in the field of morality and values, whereas science is properly concerned with factual states of affairs and the empirical investigation thereof. Thus NOMA (his own abbreviation of Non-Overlapping Magisteria) not only offers a peaceful solution for the often tortuous-looking relation between science and religion, but it is really one, so he insists, on which the better scientists and the better faithful have always been in agreement – 'better' in the sense of those many people of good will who seek dialogue and discussion rather than accentuating oppositions and fanatically seeking to impose their own limited views in a barely concealed thirst for power. True, so he argues, there have been conflicts in the history of the science/religion relationship, but those were over turf, without concern for what science and religion really are about.

Huxley was a biologist, White a politician mostly, Gould a palaeontologist. Modern historians (I am one of them) are, as a rule, unhappy with such comprehensive theses. We are appalled by the terrible simplifications, and with the vast factual shortcomings, of generalizations customarily made on so large a scale. Not only do we observe that many stories proudly advanced as facts (for instance, Galileo spending time in jail) are just myths. But even if we confine ourselves to real, not alternative facts, it proves to be just plain impossible to arrange the known facts of, say, Galileo's condemnation, or of the row about *The Origin of Species*, in such a way as to fit the notion of either just plain warfare or just a matter of disputed turf. Disagreement with, notably, the highly popular 'warfare' thesis is what motivated my elder colleague John Hedley Brooke in a large study from 1991 to demonstrate for everyone ready to listen the complexity of

every event or situation that he successively tackled. Recently historians have even begun to speak of the ‘complexity thesis’. And let me declare here emphatically that, although a historian myself, I distance myself from such a thesis. Complexity is not a thesis but a starting point; complexity is not a solution but a problem. Science and scholarship are what we have to reduce the endless complexity of things in every domain, including that of the past, to manageable proportions in the sense of clarifying and enhancing our insight.

How, then, to enhance our insight in the past of the relationship between science and religion? Here is how I, for one, have done it, in a book written for a broad audience that came out in my mother tongue (*Het knagende weten*, 2016), and for the English translation of which (‘Unsettling Knowledge’) I am seeking a suitable publisher. In that book I provide written portraits of eleven figures in a field of tension, from Kepler to Einstein (and a few shorter sketches of some 20<sup>th</sup> century figures). I argue in the book that that field of tension has first arisen in Christian Europe, due to the Scientific Revolution that occurred there in the 17<sup>th</sup> century. With the rise and subsequent expansion, in width and in depth, of modern science, a whole range of mostly new issues came up for which no ready-made solutions were around. On my hand-out I have listed a far from exhaustive list of such tension-provoking issues.

Not that all these and similar burning issues came up right away in the pioneering period of the 17<sup>th</sup> century. Nor was each of them of concern to each main figure whose thoughts and sentiments I discuss in connection with how each of them perceived, and dealt with, the field of tension.

So this is my starting point – interesting figures instructively facing an individually perceived and experienced field of tension between their science, to which they were deeply committed, and religion, which each of them took quite seriously as well. I shall now first sum up in utmost brevity the main individual conclusions at which (based on the best and most reliable literature I am aware of, plus some study of pertinent sources) I have arrived regarding four among my eleven figures: Galileo, Pascal, Newton, and Darwin. I shall then spend a few words on my own stance in the field of tension, not because it is of any interest in its own right but because I want to make it unmistakably clear that I do not fancy myself to be some superior free spirit floating above the field of tension and wholly impartially adjudicating it. And I shall conclude my presentation, not for sure with any comprehensive thesis but with some broad trends that my study of my main figures has led me to distinguish.

So, *Galileo Galilei* first. In his particular case the field of tension was not inward but outward; it is about his famous 1633 abjuration and the events leading up to it, not about his own religiosity and how to reconcile it with his science – there is no indication at all that he was anything else than a believing Roman Catholic who saw his science as supporting, not contradicting, his religion. Between 1613 and 1616 he opened, and then persistently pursued, a campaign to get his Church so far as to embrace formally the view of the Earth moving rather than standing still in the middle of the universe. The effort, which he pursued up to the level of the reigning Pope himself, backfired for reasons that have much to do with shortsightedness and lack of diplomacy on both sides, and very little with any widely differing views on what was, during those four years, the big theological bone of contention – the literal or non-literal interpretation of specific bible passages. The point is, Galileo was in full agreement with the official Church position, which was that, in principle, not every bible passage (for instance, those mentioning a flat Earth) need to be taken literally. Over a millennium earlier St Augustine had authoritatively argued that the bible has never been meant as an

astronomical textbook; those who wrote down God's revealed Word have accommodated their mode of expression to the everyday understanding of the common reader. In the 1540s the Council of Trent had confirmed that position. In 1615 the pope's most authoritative theologian, Cardinal Bellarmino, once again confirmed this position in a letter meant for Galileo, adding only for the case at hand that such a new, figurative exegesis of the bible passages in question was not to be undertaken lightly but required prior, solid proof, none of which had so far been forthcoming. In other words, Signore Galileo, where is your proof of that wholly counterintuitive idea that the Earth is not at rest? Part of the tragedy of what followed was that Galileo believed he had solid proof – unfortunately, one that no knowledgeable commentator then or later has ever found persuasive. The outcome in 1616 was a clumsily phrased, very short-sighted document, drawn up with inexplicable haste in one short week by a committee of badly informed cardinals, in which the doctrine of a moving Earth was declared heretical. That decree duly silenced Galileo, until in the 1620s the election of a new Pope gave him a chance to write a book on the subject after all, if only he presented the arguments pro and con a moving Earth wholly impartially. No reader of the outcome, his brilliant, also marvelously witty *Dialogo* of 1632, could or still can fail to perceive that, rather than even aiming for impartiality, the author is busily mocking the very idea. Small wonder that the Church authorities, thus openly defied, could not let the challenge pass; not that that well-comprehensible need also necessitated the vindictive manner in which they went about punishing Galileo, without torture to be sure, yet with enforced abjuration of a conviction so passionately defended.

How, given basic agreement between Galileo and the Vatican over the rules for biblical exegesis, could things have so drastically run out of hand? For an answer, it is imperative to distinguish between the shorter and the longer term. In the short term of the episode itself, one can, with full sympathetic understanding for the motives of the various main figures, imagine some quite realistic alternative scenarios at a number of occasions. This concerns in the first place Galileo's neglect to find out, by using the Augustinian precedent of the spherical shape of the Earth, what Cardinal Bellarmino would be willing to allow as proof. This would have prevented Galileo's blunder in putting the matter to a Pope well known for his anti-intellectualist leanings. Yet this neglect pales in comparison with the incredible short-sightedness of getting a poorly informed committee to commit the Church within a week to a standpoint – the Earth stands still, period – that the Church had sensibly avoided assuming for more than seventy years and that, as Galileo had explained with utmost clarity, was by its very nature well up to possible later revision.

Given that, with the 1616 decree, the greatest damage had already been done, in 1633 the Inquisition had no choice but to teach Galileo a lesson, even though it would have acted wisely if it had taught that lesson with more calm and less humiliation. This matters all the more because in 1616 the external effect of the decree had still been very limited – it was only the condemnation of 1633 and the wide publicity that the Vatican immediately gave it that provoked the scandal that today, almost four centuries later, still ruffles so many feathers. The significance of the short term rests chiefly in the circumstance that the mode of reasoning that goes with modern science – for instance, how to assess empirical evidence; what may count as proof – was still fully in a pioneering stage. Not by a long shot could the relation of this just budding science with customary theological and philosophical styles of reasoning have even come close at the time to some form of orderly settlement.

And now for the longer-term aspects of the 1633 condemnation. Was, with the creation of a scandal in 1633, an in any case inevitable conflict needlessly allowed to escalate, or did the trial of Galileo provoke a conflict that would never have happened otherwise? In other words, does the short-term non-inevitability for which I have just argued as a historian also apply to the longer term of what was bound to happen with the arrival of modern science in a Europe perfused by Christian belief and by authorities acting on behalf thereof?

At this point historical insight, no matter how indispensable, does not suffice any more, and no position can be adopted any longer that remains wholly unaffected by personal preferences and dislikes. In 1613 Galileo had publicly argued that the technique of non-literal reinterpretation of the Bible on the basis of new scientific insights was, of course, the natural preserve of the theologians, but that they in turn needed to consult the scientists to learn from them what those new scientific insights were that made such a non-literal exegesis desirable (or rather, urgently required). In short, as a mathematical/experimental scientist (that unprecedentedly novel *persona*) Galileo lays claim to a towering authority and relegates the theologian to the status of the scientist's errand boy. Could that claim, and the reaction it provoked, have been avoided *as such*? My historian's insight and my personal conviction both tell me no. Sooner or later, though better later than so soon, it would have become a burning issue. It was bound in any case to assume the guise of a division of labour: where does the scientist's preserve lie, where the theologian's? Only those who, with Stephen Jay Gould, consider that the latter preserve is confined to nothing but matters of morality, of the right conduct in human affairs, can have an easy time of it.

Indeed, none of my main figures fancied things to be so easy. Take *Blaise Pascal*. True, the widely-spread idea that, near the end of his short life, he gave up his science for his theology is just a myth. Throughout his life he tackled both scientific and theological issues creatively and with great intensity and dedication, in the form of relatively short, very productive outbursts, without ever appearing to have felt an unbearable tension between the two, let alone ever giving up one of these activities for the other. In seeking to come to terms with such novel issues as the new science appeared to carry with it, he did two for his time extraordinary things. He did not take, or rather rejected out of hand, the easy way out of finding proof in the so clearly apparent, beautiful order of nature as God had created it — what was soon to become highly popular as the 'physico-theological' proof of God's existence. Instead, Pascal sought proof in revelation alone, as discussed (in all kinds of, at times, math and physics inspired ways) in his *Pensées*. Likewise quite unusual for his time is that Pascal explicitly distinguished between three sources of knowledge, leading to three different methods: one, reason-bound, for mathematics, one, experiment-bound, for natural science, and one, bound by authoritative historical documents, for theology. Consequently, nowhere in his mathematical treatises, nor anywhere in his work on the void, atmospheric pressure and the equilibrium of fluids, does Pascal even mention God or use any religious concept or theological insight in his argumentation. Such a procedure goes without saying today, but in his own day, and for a considerable time afterward, such deliberate fencing off is most unusual.

Now for *Isaac Newton*. What cannot fail to strike everyone who has ever thrown a glance at the over one million unpublished words that he wrote on theological issues is his fiery religiosity. By the way, this is to say that, evidently, Richard Dawkins has never thrown even a casual glance at those million words, freely

available for all to see on the internet. In his widely read *The God Delusion*, Dawkins faces what for him is a big problem: how can it be that there have been, and still are, quite a few believing scientists? If he cannot discredit them as second-rate, he calls them personally to account if they are still alive, but he feels also called upon to do something about it if they are no longer among us. And for a British scholar like Dawkins no fish-bone sticks more deeply in his throat than, yes, Isaac Newton. How does Dawkins resolve his Newton problem? In seven bald words: "Newton did indeed claim to be religious." That is, whatever Newton stated he cannot have meant it, for how could that number one icon of exact science ever have been a genuinely believing Christian? Isaac Newton, who risked being kicked out of his Cambridge Trinity College fellowship rather than giving up his theological views; Isaac Newton, who wrote (to quote just a few from those million words):

... search the scriptures thy self and that by frequent reading and constant meditation upon what thou readest, and earnest prayer to God to enlighten thine understanding if thou desirest to find the truth. Which if thou shalt at length attain thou wilt value above all other treasures in the world by reason of the assurance and vigour it will add to thy faith, and steady satisfaction to thy mind which he onely can know how to estimate who shall experience it.

It is indeed most remarkable that Dawkins, the untiring advocate of the rational way of thinking and the empirical way of testing that is proper to science, loses sight of those fine ideals as soon as his emotions run away with him. It does not even occur to him to take an hour and consult the pertinent scholarly discipline, the history of science, to find out whether (might it not?) that impulsively written sentence is perhaps the tiniest bit mistaken. In short, if the historical facts do not suit what Dawkins already knows for certain, so much the worse for the facts ...

Back now to Newton himself. I just said that he kept his theological writing to himself, and that he risked being kicked out of his university, so as to become a social outcast for the rest of his life. This was so because Newton, while a firm believer, was a deeply heretical believer, in that he regarded the Trinity as a monstrous corruption of the true, rational religion. Indeed, the concept of a rational Ur-religion, instituted after the Flood by Noah, was at the heart of Newton's mature theological views. What was going on in his mind, to the extent that his words give access to it, was a wide-sweeping process of expurgation to which he subjected the religion in which he had grown up. And that process of expurgation of his was a rescue operation. What was in need of rescue? The old familiar religion. What did it need to be rescued from? From the danger that lurked in the manifold that robbed it of credibility in an age of science, that is, of secure or at least uniquely reliable knowledge driven primarily by mathematical / experimental reason. In order to maintain the unassailable core of religion, all the vulnerable secondary aspects had to be stripped.

This message of Newton to himself was enveloped, how could it be otherwise, in the trappings of his own time, buzzing with Noah or with the true date of the creation of the world. But that is not the point; the point is that, in the mind of the man who sounded the depths of the sciences of nature and of God more profoundly than any of his contemporaries, the need for a radical rescue operation had taken definite shape. Between the end of the Scientific Revolution and the beginning of the Enlightenment period, the natural science that held Newton enthralled had turned, so its most gifted practitioner was convinced, into a terrible danger for the God who gave meaning to his life — a danger that could only be averted, if at all, by choosing the path of radical expurgation.

Fast forward now to the middle of the 19<sup>th</sup> century. *Charles Darwin*, grandson of a scholarly rake with views hard to distinguish from atheism, remained fully at peace with the Thirty-Nine Articles of the Anglican Church until in his late twenties he began to conceive of the basics of his theory of evolution. In his case, the field of tension opened up as a consequence, not of the rise or the current state of science as such, but of the development of his own scientific views. And a field of tension it was to remain till the end of his days. In his letters he repeatedly spoke of the “muddle” of his thoughts on religion, which, indeed, kept alternating forever. At times he toyed with the idea that there was such an entity as a God. On other occasions he retreated into a form of agnosticism that allowed him to sympathize with belief in God without having to share it himself because in the last resort nothing could be said about it with certainty. Thus he could write: “I for one must be content to remain an Agnostic”, going on at once to describe himself, and thus every other agnostic as well, as a person “who has no assured and ever present belief in the existence of a personal God or of a future existence with retribution and reward.” This is for sure an ample conception of what it means to be an agnostic: you can be one and still believe in God, as long as it is not all the time and with certainty! In view of the ambiguity with which Darwin used to pronounce himself on these matters, the vision of religion of his later years is probably described best as an agnosticism that at times came close to a belief in God and at other times bordered on atheism, in an irregular oscillation that itself bears witness to his incessant uncertainty.

In short, to every person in search of written confirmation of his own preconceptions the ‘muddle’ of Darwin’s numerous statements on religion offers a wealth of opportunity to pronounce him a posthumous member of their own club. Now I am not out to win converts to any club at all, but only to present my audience with a number of earlier, instructive positions adopted by some fascinating figures in a fascinating field of tension. That is where, beside the need to combat myths, I see the prime task of us professional historians — to seek the evidence wherever we can find it, to place it in its proper context, and to weigh it impartially.

Not that, with a subject like the relation between science and religion, I fancy impartiality to be fully attainable. So let me just quietly add that I myself am definitely an atheist, although one of the non-militant variety — an ‘agnostic atheist’, if you wish. My upbringing in a secular Jewish family has left me, or so I flatter myself, free of bearing a profound grudge against Christianity or any other religion; apart, to be sure, from the expressions, and *a fortiori* the acts, of those fundamentalist believers of whatever stance who are out to convert by force women and men of persuasions at variance with theirs, or to treat them in other ways incompatible with human freedom. As to science, I have always admired it as an exciting adventure to discover the as yet unknown, and as providing the most effective procedure we fallible humans have to help us guard ourselves against our own bias and capacity for self-deception. But my admiration ceases at the very point where scientists seek to turn science (most often their own science) into the basis of some allegedly scientific world-view or rather, into some poor man’s metaphysics. From Enlightenment days onward, too many scientists have kept overstepping what Kant has so acutely defined as the limits set to science. Limits, yes, in that science is what Peter Medawar has so fittingly called ‘the art of the soluble’. But boundaries, no, for science is an open-ended enterprise, where we are not out to collect arguments for what we already believe we know for sure, but where we are personally and institutionally open to let

perceived reality, perhaps confirm but much more likely contradict our fondest convictions.

So much, or rather, so little about myself; now, by way of a hasty conclusion, just three of those broad trends that (in searching for the moral of my story once I had completed my book up to and including a debate held twelve years ago between Richard Dawkins and Francis Collins) I have noticed between 1600 and the present day.

Largely due to a science that around 1600 was brand new and then built up and expanded, Christianity has lost a great deal of ground that, before, had been unproblematically occupied by the Roman Catholic and the various Protestant ecclesiastical authorities. Take the string of mostly quite novel issues that I listed on the hand-out and for which, in the times when modern science first arose, there just were no ready-made solutions. How very different do they look four hundred years on! Not that even one of them can be regarded today as absolutely and definitively settled once and for all, but the general drift is unmistakable and, as such, long past causing a stir: science has pushed forward, the intellectual content of Christian belief has suffered heavy losses, both *qua* size and *qua* significance. An ecclesiastical body that would stick today to all or even the majority of the standpoints that prevailed around 1600 would (to put it very mildly) not have an easy time of it. The prestige of science has even increased to such an extent in the course of four centuries that, if they see a chance, ecclesiastical bodies and their representatives are eager to get a piece of the prestigious pie. This is true, for instance, of an attempt made in 1951 by Pope Pius XII to annex the Big Bang as scientific proof of the biblical account of Creation. Something similar can be observed in the battle that creationists have waged and are still waging today in the United States to secure recognition for their views as 'also science' and therefore entitled to be taught in schools on the same footing as insights from geology, palaeontology and the theory of evolution. In short, it is no longer science that seeks to suit religion, but religion that seeks to suit science, no matter how distorted at times its presentation. The retreat is, to say the least, considerable.

One Person in particular has taken a major share in the retreat. In debates today, such as one between Richard Dawkins and Francis Collins in 2006, everything tends to turn around the figure of God alone. Does He exist or not, can we think of viable intermediate forms and if so which and how? Christ hardly figures in such debates any more. The role that, entirely in accordance with Christ's own words, Pascal in the *Pensées* assigned to Him as the only pathway available to enter into a form of communication with God has not reappeared with any of my later main figures. Newton reduced Christ's status to that of one of the many prophets whom God has successively sent to recall us ordinary humans all over again from setting out on the path of idolatry. Voltaire, in his deism, could manage perfectly without Christ. In Kant's conception of 'Religion within the Boundaries of Bare Reason' Christ has a subsidiary role to perform as a symbol of utter purity, offering us something to hold on to in the unceasing struggle between the principles of good and evil at work inside us. And that has, at least in my book, been the final encounter with Christ. Not, to be sure, with Jesus, who is still generally held in high esteem as an extraordinary human being. But as God's Anointed Son He seems to have hardly any role to play any more in the field of tension between science and religion. It looks as though, more still than His heavenly Father, Christ has become the greatest victim of the Scientific Revolution.

Whatever you may think of the insights of Pascal, Newton and above all Kant (about whom I have, to my

regret, remained almost wholly silent today), most assuredly they were rigorous thinkers. Each of them lapsed occasionally into inconsistency, failed to make a particular argument really watertight, and dropped a few more stitches. Even so, the extraordinary rigor of these three stands out. They do not make things easy for their readers (in the case of Newton there was no other reader), but they do not make it easy for themselves, either. They know what they are talking about, they are at home in many domains of life, particularly of course the state of play of science in their day, which naturally included theology, the science of God. And they deploy all that knowledge systematically for their purpose: to arrive at a tenable, coherent vision of the relation between that science and their religion or what is left of it.

It is not difficult to guess where that dedication and that rigor come from: for them, as for the vast majority of their contemporaries, religion was quite literally a matter of life or death, and of life after death (no matter how symbolic, for Kant, the afterlife came to look by the end of his Critical enterprise).

The intimate connection between knowledge, rigor and dedication on the one hand, and the larger-than-life importance that their religion held for them on the other, appears *a contrario* from how over time the one decreased with the other. This is immediately evident in the case of Darwin: his knowledge of the issues in question is piecemeal and somewhat haphazard rather than systematic and comprehensive; his thoughts on the relation between science and religion are more hesitant and more strongly colored by personal circumstances and social considerations than driven by the uncompromising rigor that characterizes the thought of Pascal, Newton and Kant. After Darwin the trend seems to deepen, at least it does so in my book. When it comes to Albert Einstein, to Georges Lemaître, to Stephen Jay Gould, to Freeman Dyson, or to Francis Collins, each has his own motives for tackling the question. Each does it with pleasure, yet incidentally, jumping from one topic to another, and certainly without the thorough expertise of those three earlier ones.

Of course there are exceptions, even within the confines of this one book of mine. Max Weber, with his formidable erudition, keen analysis and impassioned style, is one (and if dedication alone were to count, Dawkins' blazing fanaticism would make him an exception as well). Outside my book, too, the combination of knowledge, rigor and dedication has not fully disappeared, to the point where the relation between science and religion has become a distinct academic discipline. And yet, and yet. All too often you see that relation discussed (in newspaper opinion columns, or on websites) in a way that might give you the impression that the debate has broken out yesterday, without any felt need to throw a passing glance at what has already been attained. Well, to convey that it is not a question about which debate began yesterday, and that whoever ignores the past risks seriously simplifying the present — that is the very message that, in my book as now also in my lecture, I have sought to impress on my audience.

NB All documentation is to be found in 'Unsettling Knowledge. Kepler to Einstein in Eleven Written Portraits', the completed English translation of a book of mine in Dutch that came out in 2016 with the publishing house Prometheus in Amsterdam under the title *Het knagende weten*.

Here is the **Table of Contents** of the authorized English translation:

INTRODUCTION .....	1
Charting the field of tension.....	2
<i>Personal experience?</i> .....	5
<i>Choices made in this book</i> .....	6
<i>A note on the author's own budding views</i> .....	8
PRELUDE.....	10
Unbroken harmony – Johannes Kepler.....	11
<i>God's building plan for the world</i> .....	11
<i>Visionary craftsman</i> .....	13
<i>Eccentricities as far as the eye can see</i> .....	16
<i>Kepler's faith: mystical, idiosyncratic, reconciliatory</i> .....	18
<i>Kepler's harmony: time-bound and lost for good</i> .....	20
Into the fray – Gijsbert Voet .....	22
<i>Erudition in the service of polemic</i> .....	23
<i>Against the innovators</i> .....	24
<i>No Christianity remains</i> .....	26
FIGURES IN THE FIELD OF TENSION.....	29
A conflict spun out of control – Galileo Galilei.....	30
<i>The bare facts</i> .....	31
<i>Open questions</i> .....	40
<i>The conflict inevitable?</i> .....	45
<i>Two steps forward, one step back</i> .....	46
Back to revelation – Blaise Pascal .....	48
<i>Reliable knowledge</i> .....	48
<i>For and against void space</i> .....	50
<i>The mathematician's thought, and limits set to it</i> .....	54
<i>A defence of Christianity: why and for whom?</i> .....	56
<i>Rational and natural theology</i> .....	58
<i>Criteria for a true religion</i> .....	60
<i>Revelation</i> .....	62
<i>Science and religion in Pascal – a recapitulation</i> .....	63
Towards a faith held in check by reason – Isaac Newton .....	65
<i>The frame of nature</i> .....	66
<i>Newton's 'reason', and Pascal's</i> .....	68
<i>Humanity's primordial, rational religion</i> .....	70
<i>Newton's religion and his science in public</i> .....	71
<i>Newton's religion and his science in private</i> .....	74
<i>What is left of religion?</i> .....	79
An Enlightenment intermezzo.....	82
<i>Physico-theology between Newton and Voet – Bernard Nieuwentijt</i> .....	82
<i>Deism in Newton's footsteps – Voltaire</i> .....	85
<i>Pantheism according to Spinoza – atheism in disguise?</i> .....	89
The field of tension dissected to the marrow – Immanuel Kant .....	93
<i>Lingering in dogmatic slumber</i> .....	94
<i>What can we know at most?</i> .....	99
<i>If we were fully rational beings – how should we act?</i> .....	106
<i>To which heights can our power of judgement take us?</i> .....	113
<i>Front or back door – the outcome of twenty years of Critique</i> .....	114
<i>What is left of religion?</i> .....	116
<i>The field of tension in Kant's personal life</i> .....	120
<i>A comparative look back – Kant and Pascal</i> .....	123
<i>A glance ahead</i> .....	124
The end of purposiveness? – Charles Darwin .....	126
<i>A clock that kept on ticking</i> .....	126

<i>Voyaging with the Beagle</i> .....	127
<i>The theory takes shape</i> .....	132
<i>Loss of faith</i> .....	136
<i>Publication over his dead body?</i> .....	139
<i>The Origin of Species as a source of scientific debate</i> .....	142
<i>The Origin of Species as a source of commotion</i> .....	147
<i>Darwin as an agnostic, and what that meant</i> .....	150
<i>The end of purposiveness?</i> .....	152
<b>A religious cripple – Max Weber</b> .....	156
<i>A run-up about Calvinist capitalists</i> .....	157
<i>Striving for salvation and the everyday world – five irresolvable fields of tension</i> .....	159
<i>Weber’s science – a closer scrutiny</i> .....	167
<i>Religion in Max Weber’s life</i> .....	169
<b>If God is no dice player, what is He? – Albert Einstein</b> .....	174
<i>Einstein’s cosmic religion</i> .....	175
<i>Einstein on science and religion</i> .....	177
<b>POSTLUDE IN THREE ENCORES</b> .....	181
<b>First Encore: A bouquet of divergent stances</b> .....	182
<i>A RC Big Bang, a RC evolution? Georges Lemaître and Pierre Teilhard de Chardin</i> .....	182
<i>Two Non-Overlapping Magisteria – Stephen Jay Gould</i> .....	184
<i>Mind and intelligence interwoven in the universe – Freeman Dyson</i> .....	186
<i>New and old in a recent debate – Francis Collins vs. Richard Dawkins</i> .....	187
<b>Second Encore: Main themes identified</b> .....	191
<i>An overarching thesis?</i> .....	191
<i>Abandoned standpoints</i> .....	192
<i>Man and colibri</i> .....	194
<i>Intelligent Design then and now</i> .....	194
<i>Decreasing dedication, decreasing rigour</i> .....	195
<i>The globalisation of the notion ‘religion’</i> .....	196
<i>Shifts of meaning in the concept of reason</i> .....	197
<b>Third Encore: A personal conclusion</b> .....	199
<i>Immanuel Kant’s shelf-life</i> .....	199
<i>Agnostic atheist</i> .....	201
<i>Knowing, believing, hearing, seeing, doing</i> .....	205
<i>Some ‘thank you’s’</i> .....	209
<i>Literature consulted and sources of citations</i> .....	210