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"Understanding and Interpreting the Runes of Nature"

A reconsideration of Kierkegaard's critique of natural science

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Abstract: Kierkegaard's attitude to natural science is equivocal. While his published works deal with open criticism of Hegel and his Danish followers, in his journals and notebooks we find a more clandestine, albeit no less intense, critique of the scientific endeavors of his day. The biting sarcasm that characterizes this critique has often led to the view that Kierkegaard, as a Christian thinker of subjectivity, naturally has to be stubbornly against scientific progress. On closer inspection, however, we find a more complex view hidden beneath the noisy surface of Kierkegaard's vigorous rhetoric. The point of this article is to articulate this more complex view against the backdrop of a historical sketch of the relationship between science and religion at the time of Kierkegaard, and through an interpretation of Kierkegaard's statements in his journals and notebooks.

Key Words: Kierkegaard – Science – Christianity – Human Nature – Speculation – Rationalism – Empiricism – Darwin – Hegel

Writing about Kierkegaard's critique of natural science is an ambiguous undertaking. On the one hand, it is a difficult task because Kierkegaard did not have a thorough knowledge of the natural science of his time, only sporadically comments on the rapid scientific developments of his time, and not least because his entire thinking seems to be based on a persistent – and at times fierce – attempt to free humanity from the seductive snares of scientific objectivity. Writing about his criticism of natural science may therefore seem uninteresting from a natural science perspective and glaringly self-evident from a theological or philosophical perspective. On the other hand, it is natural to ask the question, since Kierkegaard's criticism of natural science and the hungry pursuit of objective certainty seems even more relevant in a time like ours,

when the achievements of natural science set the agenda for our view of humanity, our understanding of existence, and our ethical considerations. In other words, there is an obvious task in trying to understand how Kierkegaard's criticism relates to the view of humanity that has emerged in step with the gradual dismantling by the natural sciences of the theological premises that underlie Kierkegaard's thinking.

In this article, I will reconsider Kierkegaard's critique of the natural sciences in an attempt to show that such a reconsideration is interesting despite both the obvious and the strained aspects of the undertaking. The shrill tone of his criticism has often drowned out the fundamental considerations of human existence in a natural world that constitute the theoretical core of the criticism.

The first section presents a historical background that may bring out the nuances in Kierkegaard's critique of natural science more clearly. In this context, I will attempt to clarify the complex position of natural science in the contemporary view of the relationship between Christianity and science. Against this background, the second section moves into the heart of Kierkegaard's critique. Here, I will outline Kierkegaard's view of natural science based on his colorful statements about natural scientific studies of human beings, and then highlight what I consider to be the fundamental systematic point of his criticism. The third and final section then elaborates on this point. I argue that the systematic considerations behind the critique are a fundamental part of Kierkegaard's view of humanity, and that his critique of natural science becomes most interesting when read in light of his view of humanity. If we approach Kierkegaard's critique of natural science in this light, we find a critique that is, if possible, even more relevant today. In this context, it becomes apparent that his criticism of natural science is a sharp objection not so much to the fact that natural science and scientific methods are used in the attempt to understand human beings, but rather to the way in which this is done.

Natural science and Christianity

In a note from 1850, Kierkegaard observes that "The tendency of 'the species' is clearly to replace religion with natural science."[1] Kierkegaard hit the nail on the head here, and more accurately than he himself—or anyone else in his time—could have imagined. This tendency developed into a veritable revolution just

1. *Søren Kierkegaard's Writings* (Copenhagen: Gad 1997-2012), vol. 23, 27 (hereinafter cited as SKS, followed by volume and page number).

A few years after Kierkegaard's death, Darwin published his groundbreaking book on the origin of species in 1859. Our view of ourselves, the world, and other people was never the same again. The remaining decades of the nineteenth century witnessed a relentless battle between the burgeoning natural sciences and an increasingly defensive and weakened theology. Unsurprisingly, the theological perspective faded into the background of cultural and scientific life during the twentieth century as natural science and technology made impressive advances, and there are no immediate signs that this trend will change in the twenty-first century. As mentioned, Kierkegaard died before Darwin truly consolidated the triumph of the natural sciences in the second half of the nineteenth century. However, this does not mean that the natural sciences did not flourish in the first half of the century, during Kierkegaard's lifetime. On the contrary, there was rapid scientific development underway. The fundamental scientific problem in the hectic years leading up to Darwin's publication was the lack of a convincing basic narrative about the biological development of humans from natural to cultural beings. Without the possibility of embedding their discoveries in such a narrative, the various branches of science were unable to do much more than form a fragmented picture of humans. As a result, scientific discoveries had difficulty exerting any decisive influence on education or finding any reflective resonance in the broader intellectual culture, where philosophy, aesthetics, and especially theology still formed the backbone of the educational ideal of the time. Most natural scientists chose to focus on their own areas of interest—be it butterflies, different types of rocks, or the pulmonary circulation—without attempting to develop grand theories about human nature or the mysteries of cosmology. It was not until Darwin's theory of evolution that the various scientific disciplines found a coherent background unmarked by theological undertones, on which they could begin to work their way towards a decisive new view of humanity. As the geneticist and evolutionary biologist Theodosius Dobzhansky accurately puts it in a famous article from 1971: "Seen in the light of evolution, biology is, perhaps, intellectually the most satisfying and inspiring science. Without that light it becomes a pile of sundry facts – some of them interesting or curious but making no meaningful picture as a whole".[2]

2. Theodosius Dobzhansky, "Nothing in Biology Makes Sense except in the Light of Evolution," *The American Biology Teacher, vol. 35*, no. 3 (1973), 129. For a thorough historical and systematic introduction to Darwin's decisive importance for the unification of evolutionary theoretical speculation, see Philip Kitcher, *The Advancement of Science: Science without Legend, Objectivity without Illusions* (Oxford: Oxford University Press 1993), 11-57.

This lack of an independent scientific alternative to a theological view of nature and humanity, on the other hand, made the findings of natural scientists easy prey for Romantic metaphysical speculations about the living unity of nature. The melodious metaphysical approaches came mainly from idealistic natural philosophy in Germany and from Newtonian natural theology in England.

The Romantic systematic thinkers put forward grandiose total explanations of man and his place in nature. Despite Hume's empirical discrediting of the design argument for the existence of God[4]and Kant's transcendental philosophical weakening of the ontological proof of God's existence [5], these thinkers continued undeterred with their medieval metaphysical cathedral building, in which God, the world, and humanity found their immutable place in the architectural blueprint of Christianity. Among the natural theologians in England, these explanations were based predominantly on rudimentary but imaginative evolutionary theories, while the idealistic natural philosophers in Germany largely based their explanations of man on sophisticated cosmological theories that were based more on romantic views of nature than on actual empirical research.

Common to both schools of natural scientific holistic thinking was that they were unable – or unwilling – to use natural scientific research to fundamentally change the theological understanding of nature. Instead of coming up with a real alternative to a theological understanding, they tried to integrate theological assumptions with the leading scientific results of the time. Mixed with different theological elements, the scientific diversity in these stories ended up

3. The most influential representatives of idealistic natural philosophy in Germany were F.W.J. Schelling (1775-1854) and Franz von Baader (1765-1841). Key figures in the highly diverse natural theology in England include the Anglican priest William Paley (1743-1805), the Cambridge philosopher William Whewell (1794-1866), and the zoologist Richard Owen (1804-1892). An introduction to German natural philosophy in idealism, with particular reference to Schelling and Baader, can be found in Klaus Stein, *Naturphilosophie der Frühromantik* (Paderborn: Schöningh 2004), 9-45. For an introduction to the complex relationship between theology and natural science, with particular reference to English natural theology in and around the first half of the nineteenth century, see the classic treatment by John Hedley Brooke, *Science and Religion: Some Historical Perspectives* (Cambridge: Cambridge University Press 1991), 193-224.

4. David Hume, *Enquiries concerning Human Understanding and concerning the Principles of Morals*, ed. L.A. Selby-Bigge (Oxford: Clarendon Press 1975), 132-148 (1st Enquiry, Section XI); *The Natural History of Religion and Dialogues concerning Natural Religion*, ed. A. W. Colver and J. V. Price (Oxford: Clarendon Press 1976), 158-208, 261 (Dialogues, Parts II-VII, XII).

5. Immanuel Kant, *Kritik der reinen Vernunft* (Hamburg: Felix Meiner Verlag 1998), A592/B620-A602/B630.

skim over without leaving a clear picture of man and his place in nature.

On the domestic scene, the first half of the century was particularly marked by H.C. Ørsted's (1777-1851) institutional promotion of the natural sciences and his persistent attempts to reconcile a scientific approach with a pared-down version of Christianity.[6] In Ørsted, we find a unique romantic blend of idealistic natural philosophy and natural theology. Ørsted shared Henrich Steffens' Schellingian enthusiasm for the pursuit of unity in nature, but differed from him in his empirical approach and his Newtonian penchant for experimental philosophy. Although his speculative streak only found its unrestrained expression later in his writing and found its way into the intellectual public sphere with the publication of his various treatises of a more "edifying nature" [7] in *The Spirit in Nature* (1850-51), his thinking was from the outset characterized by an unrelenting effort to unite nature and reason. He makes no secret of this attitude in the lyrical conclusion to his famous 1808 article *Experiments on Sound Figures*: "Truly, we can repeat with joy and triumph over the nobility of our spiritual being that what captivates and enchants us in the art of music, allowing us to forget everything while our soul floats away on the stream of sound, is not the mechanical stimulation of tense nerves; but it is nature's deep, infinite, incomprehensible reason that speaks to us through the stream of sound."[8]

Alongside Ørsted's speculations on nature and his eager attempts to reconcile nature and reason, the period was, as we know, marked by Heiberg's (1791-1860) speculative logic and the no less lively theological attempts to reconcile faith and knowledge on the basis of Hegel's dialectical systems thinking. Here, natural science and empiricism are seen as a necessary element in a comprehensive dialectical movement towards scientification.

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6. For a thorough overview of the various philosophical currents of the period, based on the most influential representatives, see Carl Henrik Koch, *Den danske idealisme 1800-1880* (Copenhagen: Gyldendal 2004). A nuanced portrait of Ørsted and his crucial importance for the cultural dissemination of natural science in the first half of the nineteenth century can be found in Arne Hessenbruch, "The Making of a Danish Kantian: Science and the New Civil Society," *Hans Christian Ørsted and the Romantic Legacy in Science*, ed. Robert M. Brain, Robert S. Cohen, Ole Knudsen (Dordrecht: Springer 2007), 21-54.

7. Koch (2004), 73.

8. H.C. Ørsted, "Experiments on Sound Figures," *Natural Science Writings, Volume II*, ed. Kirstine Meyer (Copenhagen: The Royal Danish Academy of Sciences and Letters 1920), 11–34 (34). For a detailed treatment of the early Ørsted's complex view of the relationship between idealism and experimental science, see Frederick Gregory, "Hans Christian Ørsted's Spiritual Interpretation of Natural Science," *Hans Christian Ørsted and the Romantic Legacy in Science*, ed. Robert M. Brain, Robert S. Cohen, Ole Knudsen (Dordrecht: Springer 2007), 399-416.

of dogmatics. In particular, H.L. Martensen's (1808-1884) attempt to unite philosophy and theology in an expanded objective recognition of eternal truth reflects the general striving of the time for a solid methodological approach that is finally capable of explaining the meaning of human life in the world and in relation to God. In his licentiate thesis from 1837, he therefore writes with confidence that an objective method "is the necessary link between the object of cognition and the cognizing subject. To doubt that such an objective method really exists would be tantamount to admitting that there is no transition or connection between God and ultimate knowledge, that, in other words, there is no knowledge of God and divine things."[9]

Kierkegaard thought and wrote in the midst of this cultural turmoil of isolated scientific findings and more or less theological overall pictures of human nature, its conditions of existence, and its tasks in the world. In this context, it is important to remember that Kierkegaard's criticism of natural science, despite all its tremulous ferocity, pales in comparison to his criticism of Danish Hegelianism and its speculative attempts to reconcile faith and knowledge. In the third and final section, I will argue that Kierkegaard's criticism of the natural sciences can be read as a complex moment in this more well-known part of his thinking. Based on the historical outline, such a reading will help to articulate a current systematic point in Kierkegaard's criticism. But to get there, it is necessary first to sketch a picture of Kierkegaard's critique, including a selection of his colorful attacks on the scientific ambitions of his time, and then to unravel the systematic threads of his fierce critique.

"Our Lord shits on the natural sciences."

When Kierkegaard's view of natural science is discussed, it is often characterized by the immediately unambiguous attitude expressed in, for example, this blunt statement from 1853 (SKS 25, 186). This noisy rhetoric in his criticism of the natural sciences helps to promote a superficial expression of unambiguity, which, however, on closer inspection, turns out to cover an interesting systematic point.

9. Hans Martensen, *Den Menneskelige Selvbevidstheds Autonomi i vor Tids dogmatiske Theologie*, published in Danish by L.V. Petersen (Copenhagen: C.A. Reitzel 1841), 2-3.

10. An example of an unambiguous understanding of Kierkegaard's view of natural science can be found in Maria Mikulová Thulstrup's article "Kierkegaard and Natural Science."

Kierkegaard's criticism of natural science is mainly found in his journals and notebooks. As is well known, his published works are preoccupied with criticism of Hegel's systematic thinking and the attempts of Danish Hegelianists to tie philosophy and theology into the dialectical movement toward a rational clarification of the foundations of Christianity and the challenges of life. Natural science was therefore not at the forefront of Kierkegaard's critical concerns. Criticism of 'knowledge', 'sciences' and 'scientific' flows across the pages of his published works, but in the vast majority of cases it refers to Kierkegaard's criticism of the attempts of his time to scientify philosophy and theology rather than to natural science.[11] As is evident from the selection of quotations below, this does not mean, however, that the criticism of the natural sciences, as found in the journals and notebooks, is inferior to the criticism of Hegelianism in the published works in terms of energy, sharpness, or linguistic inventiveness.

Apart from a single, longer reflection in letter form from his student days (to which we will return in a moment) and a few scattered notes in the last years of his life, Kierkegaard's reflections on natural science are concentrated around the year 1846. This is perhaps not surprising, since it is the year of the publication of *Concluding Unscientific Postscript*, in which he deals in depth with the relationship between subjective engagement and objective understanding.

As mentioned, biting and sarcastic formulations contribute to reinforcing the perception that Kierkegaard's attitude toward natural science is unambiguous. Here is a colorful selection from the notes from 1846: "*All corruption will ultimately come from* the natural sciences" (SKS 20, 63; italics in the original); "in a sense, the whole of medicine is a joke" (SKS 20, 66-67); "Of all sciences, natural science is the most boring" (SKS 20, 67); "If the natural sciences had been developed in Socrates' time as they are now, then all sophists would have become natural scientists" (SKS 20, 70); "All in all, the extravagance of the natural sciences lent itself admirably to comedy" (SKS 20, 72). Medical science and enthusiastic

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science," *Kierkegaardiana XIII* (Copenhagen: Munksgaard 1971), 53-63 (61), unequivocally concludes that "Søren Kierkegaard belonged to the Christian fringe that disapproved of natural science."

11. In the section above, we saw that without a convincing alternative to a theological narrative about the origin and development of humankind, it was not yet possible to distinguish clearly between natural science and other forms of science. An informative discussion of the historical development of the strong categorical—at times ontological—distinctions between 'natural science,' 'science,' 'religion,' and 'theology' can be found in Peter Harrison, "'Science' and 'Religion': Constructing the Boundaries," *Science and Religion: New Historical Perspectives*, ed. Thomas Dixon, Geoffrey Cantor, and Stephen Pumfrey (Cambridge: Cambridge University Press 2010), 23–49.

use of the microscope and the newly invented stethoscope: Doctors or "these pure butchers," as he also calls them, "who believe they can explain everything with the help of the knife – and then with the help of the microscope are an abomination to me" (SKS 20, 60); "If God walked around with a stick in his hand, it would especially affect these serious observers with their microscopes. God would use his stick to beat all hypocrisy out of them and the natural scientists" (SKS 20, 64); "What a sensation it caused: to use a stethoscope. And now it will soon come to the point where every barber does [it], so that when he has shaved someone's beard, he asks: would you perhaps also like to be stethoscoped" (SKS 20, 67); "With the natural sciences, it is of no use at all to engage [in them]. You stand there helpless and completely unable to control anything. The researcher immediately begins to distract you with his trivialities, now you have to go to Australia, now to the moon, now down into a cave underground, now the devil in your ass – after an intestinal worm; now the telescope must be used, now the microscope: who the hell can stand it!" (SKS 20, 73).

Three features of the scientific enthusiasm of the time particularly aroused Kierkegaard's fiery temperament in his various notes from 1846: that natural science brings us closer to God, that it treats ethics as physics, and that it reveals the true nature of man. In other words, he reacts strongly to the fundamental belief of the time that, with the help of the sharp instruments, fascinating discoveries, and statistical calculations of natural science, we would finally be able to find tangible answers to questions about God, ethics, and humanity. When the sparks of his furious sarcasm finally burn out for a moment, it is possible to catch a brief glimpse of the core of his criticism: "But joking aside, let us speak seriously. The confusion lies in the fact that it is never dialectically clear which is which, how philosophy has to use natural science. Is the whole thing an ingenious metaphor (so that one might as well be ignorant of it), is it an example, an analogy, or is it of such importance that the theory must be formed in relation to it? For a thinker, there can be no more terrible torment than to live in the tension of accumulating details while constantly seeing the next thought, the conclusion, coming. If the natural scientist does not feel this torment, then he must not be a thinker" (SKS 20, 73). The fundamental question that sets Kierkegaard's critical thinking in motion is thus how we should apply science's growing knowledge of nature in our attempt to clarify and relate to the challenges of human life.

In order to unfold this main point in Kierkegaard's critique, it is necessary first to understand Kierkegaard's complex attitude toward the scientific flourishing of his time. To read Kierkegaard exclusively as the lonely and brilliant exception amid the penchant of his time for scientific certainty

– be it as a passionate champion of subjectivity or an uncompromising defender of Christianity – is problematic because it risks overlooking the nuances of his criticism and thereby obscuring the systematic point. Kierkegaard was undoubtedly an exceptional thinker, but his thinking is embedded in and shaped by the era in which he lived. Therefore, the era's penchant for science and scientificity was crucial to his thinking, not only as a target for his criticism and sarcasm, but also as a fundamental part of his systematic investigations of humanity and its relationship to God, the world, other people, and, not least, itself.

His early theoretical works in particular are characterized by studies of the relationship between different scientific disciplines. Already in *On the Concept of Irony,* Kierkegaard works his way toward an understanding of the meaning of irony through, among other things, a systematic discussion, inspired by Schleiermacher's reading, of the relationship between scientific objectivity and dialogical flexibility in Plato's philosophy (SKS 1, 113-116). At the same time, understanding The Knight of Faith in *Fear and Trembling* is only possible on the basis of Kierkegaard's analyses of aesthetics and ethics as separate sciences. Here we learn, among other things, that "Ethics is a dangerous science" (SKS 4, 196), whereas "Aesthetics, however, is a polite and sensitive science" (SKS 4, 175). The profiling of the significance of paradox for faith in *Philosophical Fragments* takes place against the backdrop of the scientific-theoretical critique of the concept of necessity, which is elaborated in the notoriously difficult and condensed *Interlude* (SKS 4, 272-287). *The* entire *concept of anxiety* is based on a fundamental distinction between psychological and dogmatic science, and in particular the densely written introduction (SKS 4, 317-331) is constructed as a complex argument for the necessity of a strict scientific distinction between ethics and dogmatics with the help of psychology as a third scientific discipline. In the large-scale confrontation with the tentacles of objectivity in *the Concluding Unscientific Postscript*, Johannes Climacus very precisely describes the attitude that fundamentally characterizes the relationship to science in the systematic work that takes place in the early part of his authorship: "One sometimes hears uneducated or half-educated or pompous geniuses disparaging the critical work done on ancient writings, and one hears them mocking the learned scholar's concern for the most insignificant details, which is precisely his honor, that he considers nothing scientifically insignificant. No, scholarly philology is entirely justified, and the present author certainly has some reverence for what science sanctifies" (SKS 7, 32-33).

Kierkegaard is thus not merely a critic of the obsession with scientificity of his time. He himself makes diligent use of the new scientific approach to classical philosophical and theological problems. An

early note can help us better understand what this ambiguity in Kierkegaard's view of science and scientificity means for his criticism of natural science.

As a young student, Kierkegaard, like most other intellectuals of his time, was fascinated by natural science, and he was particularly attracted to Ørsted's charismatic promotion of scientific research.[12] This is evident from a long letter he wrote on June 1, 1835, to his relative, the prominent natural scientist Peter Wilhelm Lund (1801-1880). The letter was in all likelihood never sent,[13] and apart from an admiring reference, it is not really about Ørsted, but about Kierkegaard's own reflections on his impending choice of career. In the present context, the letter is interesting, not so much because it contains the first – and only unequivocally enthusiastic – mention of the natural sciences, but rather because of a distinction between two forms of scientific research that can help clarify the fundamental point of the later fierce criticism of natural science.

Kierkegaard distinguishes between purely empirically oriented natural scientists (SKS 17, 20-21), "who seek to understand and interpret the runes of nature" and who are "satisfied with their details," and the more ambitious natural scientists, including Ørsted, "who through their speculation have found or strived to find that Archimedean point, which is nowhere in the world, and from there have now contemplated the whole and seen the details in the right light." As a child of the era's penchant for unrestrained reflection, Kierkegaard naturally feels most attracted to the speculative form of natural science, since the purely empirically oriented form seems to him to merely provide "a substrate for the thinking and processing of others."

There are two crucial aspects to Kierkegaard's distinction. On the one hand, it reveals that at some point between 1835 and 1846, there was a sudden shift in his attitude toward natural science, and at the same time, it qualifies his view of scientific research and its influence on our approach to humanity. On the other hand, it anticipates a central discussion in today's debate on the significance of natural science for our view of humanity. I will deal with the first aspect here, while returning to the second aspect in the concluding part of the next section.

12. More information about Kierkegaard's relationship with Ørsted can be found in Bjarne Troelsen, "Hans Christian Ørsted: Søren Kierkegaard and The Spirit of Nature," *Kierkegaard and His Danish Contemporaries. Tome I: Philosophy, Politics, and Social Theory*, ed. Jon Stewart (Farnham: Asgate 2009), 215-227.

13. Joakim Garff, *SAK. Søren Aabye Kierkegaard. A Biography* (Copenhagen: Gads Forlag 2000), 45-47.

In a way, Kierkegaard's distinction is simply a natural expression of the cultural situation outlined in the section above, where natural science was either practiced as individual specialized sciences or as part of romantic holistic speculations. As mentioned, Kierkegaard was fascinated by Ørsted's and other prominent natural scientists' attempts to "clarify and solve the mystery of life," and he particularly admired the "calm, harmony, and joy that one finds in them" (SKS 17, 21) in contrast to the confusion associated with the "monstrous diligence" of purely empirical researchers. At the same time, however, he is apprehensive about embarking on the "40 years in the desert" he would have to endure in order to reach the "promised land of science." These years seem too "precious to him, and all the more so because I believe that Nature also has a side to it that cannot be understood through insight into the secrets of science" (SKS 17, 21). Despite all his youthful enthusiasm for natural science, Kierkegaard nevertheless reveals a certain ambivalence in his attitude. His enthusiasm is, so to speak, pierced by a nagging feeling that nature conceals a side that cannot be discovered by either the microscope or the telescope, and whose movements cannot be fathomed with the stethoscope's convolutions of hollow tubes. This feeling is not elaborated upon in the letter, but it is precisely this feeling that slowly matures over the next decade, until it finally finds its furious expression in the pages of the notebook from 1846.

In the violent confrontation of 1846, we find only a criticism of the speculative natural scientists for whom he had such pronounced admiration ten years earlier. The empirically oriented scientists who are "satisfied with details," on the other hand, seem to have slipped completely out of Kierkegaard's horizon. This may be an expression of the fact that he no longer distinguishes between the two directions within the cultivation of natural science, or that he has simply chosen to concentrate on the direction he now considers to be the most dangerous form of scientific endeavor. In light of his avid use of various sciences, his eye for empirical nuances, and his keen sense of scientific distinctions, which we can trace in the furiously productive start of his authorship towards the end of the same period, the second possibility seems to be the most likely. It is solely the speculative use of scientific methods, discoveries, and instruments in the attempt to unravel the mystery of life that arouses his indignation. The empirical natural scientist is harmless—even helpful—in this context. With his "monstrous zeal" for collecting physical phenomena, he can at most confuse the thinker who believes he can find answers to all the problems of human life in the rustling of the wind or the innervation of the pineal gland. For the thinker who, on the other hand, understands how to distinguish between the internal and the external, this form of natural science merely provides "a substrate for the thinking and processing of others," which Kierkegaard, with his sense of empirical detail, finds difficult to reject.

and processing," which Kierkegaard, with his sense of empirical detail, finds difficult to dismiss.

The target of Kierkegaard's criticism is thus the contemporary attempt to speculate behind phenomena in order to find an explanatory basis on which the individual can live his life without having to worry about existing in the confusing diversity of existence. Whether this speculative search for a secure foundation is guided by a sophisticated philosophical system or carried out with the help of the sharp instruments of natural science is, in itself, secondary. The real starting point for his criticism is the attempt to explain human beings on the basis of a predetermined harmony between sensory impressions and rational explanations, empirical phenomena and the movements of the soul. In other words, it is the attempt to tame the irregularity of existence and dull the individual's understanding of life's challenges through a bland scientific approach that really sets Kierkegaard's criticism in motion. The crucial problem with speculative natural science is that, with its objective structures and impersonal explanations, it believes it has outlined a solid scientific foundation for a comprehensive view of humanity. In Kierkegaard's thinking, especially as it unfolds in *the Concluding Unscientific Postscript*, we encounter the critical point that it is precisely the conviction that we can arrive at such a foundation that causes us to misunderstand existing human beings and their concrete problems. As he notes in the margin of his reflections in the early draft of his letter to Peter Wilhelm Lund: "How confusing is often the contemplation of life when it reveals itself to us in all its richness, when we ponder the diversity of abilities and talents [...] -- and now a cold philosophy wants to explain it all to us in terms of a pre-existence and not see it as an endless painting of life with its variegated play of colors and its countless nuances" (SKS 17, 23).

In the last section, I will elaborate on this systematic point in Kierkegaard's critique in light of his view of humanity. Finally, I will attempt to show how this point anticipates and can still contribute to the current debate on the use of natural science in our attempts to understand humanity and human phenomena.

What and who is a human being?

Kierkegaard's interest in human beings cannot be satisfied by a physical or rational explanation because, according to Kierkegaard, human beings are neither rational nor physical beings. Human beings are not an 'either-or', but a synthesis, a 'both-and', and – as we learn in *the Concluding Unscientific Postscript* – "Such an intermediate state is approximately what

to exist, something that befits an intermediate being such as man" (SKS 7, 301). In other words, what man actually is is an open question and therefore cannot be used as a starting point for explaining human problems. Kierkegaard also repeatedly reminds his readers—as he does here in *Repetition*—that even Socrates, the great connoisseur of human nature, did not "know with certainty whether he was a human being or an animal even more changeable than Typhon" (SKS 4, 37).[14]

To regard man as a composite being who is not immediately either physical or rational, but who must relate to being subject to both the laws of physics and the norms of rationality, is not a view of humanity that Kierkegaard plucks out of thin air. On the contrary, he finds it expressed in the "picture of life" he has chosen to spend his life studying. In his study, he finds anxiety to be a fundamental human phenomenon, and in the countless forms of anxiety, a fundamental ambiguity that runs like a thread through the manifold traits of human beings. By following the movements of anxiety in human thoughts and actions, he arrives at the conviction in *The Concept of Anxiety* that "if a human being were an animal or an angel, he would not be able to feel anxiety. Since he is a synthesis, he can be anxious, and the deeper his anxiety, the greater the human being, though not in the sense in which humans generally take it, where anxiety is external, for what is outside the human being, but in such a way that he himself produces the anxiety" (SKS 4, 454). By allowing a view of humanity to grow out of the ambiguity of anxiety in the incessant struggle between nature and reason, Kierkegaard consciously breaks with contemporary attempts to form a view of humanity in unbroken continuity with a natural science-influenced philosophical and theological systems thinking. Anxiety is an intangible human problem that cannot be explained on the basis of either a natural scientific or a rational doctrine of man. Overall, Kierkegaard projects his view of humanity on the basis of the existential ambiguity of anxiety and through a critique of entrenched anthropological models. Michael Theunissen has identified this as the most important feature of Kierkegaard's thinking: "Kierkegaard's fundamental achievement lies in the existentialisation of the anthropological categories provided by the philosophical and theological tradition."[15]

14. See also *Philosophical Fragments* (SKS 4, 242, 251) and *Concluding Unscientific Postscript* (SKS 7, 101).

15. Michael Theunissen, "Das Menschbild in der 'Krankheit zum Tode,'" *Materia-len zur Philosophie Søren Kierkegaards*, ed. Michael Theunissen and Wilfrid Greve (Frankfurt am Main: Suhrkamp 1979), 496–510 (497).

By making the concrete human experience of fundamental anxiety—but also of joy, melancholy, and despair—the starting point for our understanding of human beings, Kierkegaard radically breaks with previous attempts to systematically understand the complexities of human life. Instead of explaining human beings as either fundamentally rational or fundamentally physical beings, Kierkegaard allows human existence itself to reveal the categories (e.g., synthesis, freedom, relationship, necessity, possibility, self) through which human beings must be explained, without predetermining a fundamental view of human nature.[16] In a thought-provoking article from 1963, Paul Ricœur suggests viewing the innovative nature of these categories of existence as a further development of Kant's transcendental critique of the limits of objective knowledge.[17] In Ricœur's reading, Kierkegaard returns to Kant on the basis of German idealism's exploration of subjectivity. With the help of Hegel, Schelling, and Fichte, Kierkegaard sharpens the Kantian synthesis of human experience (which was still based on a physical understanding of experience) by highlighting the personal aspect of our experience of the world, which Kant shied away from.[18] In doing so, he reveals "*the conditions of possibility for an experience*, not a physical experience or an experience parallel to physical experience, but a fundamental experience, namely the experience of the realization of our desires and our effort to be [*notre effort pour être*]" (Ricœur 1992, 38). For Kierkegaard, human beings are not merely a synthesis of the physical and the rational, but what is human lies precisely in the constant effort I experience when, as a human being, I am forced to relate to being both a physical and a rational being. Kierkegaard's further development of Kant's fundamental

16. This phenomenological approach to Kierkegaard's theory of subjectivity has found its strongest systematic expression in Arne Grøn: *Kierkegaard: Subjektivitet og negativitet* (Copenhagen: Gyldendal 1997) and the article "Kierkegaards Phänomenologie?", *Kierkegaard Studies. Yearbook*, ed. Niels Jørgen Cappelørn and Hermann Deuser (Berlin: de Gruyter 1996), 91-116. A historical and systematic review of the relationship between Kierkegaard and phenomenology can be found in Claudia Welz, "Kierkegaard and Phenomenology," *The Oxford Handbook of Kierkegaard*, ed. John Lippitt and George Pattison (Oxford: Oxford University Press 2013), 440-463.

17. Paul Ricœur, "Philosopher après Kierkegaard," *Lectures 2: La contrée des philo-sophes* (Paris: Édition du Seuil 1999), 29–45 (36–39).

18. As early as 1929, Martin Heidegger argued that Kant shied away from formulating an actual theory of subjectivity by consistently allowing the two roots of cognition, sensibility and understanding, to connect solely by means of man's intangible power of imagination, which in his theory remains "a blind, albeit indispensable function of the soul, without which we would have no cognition at all," Kant (1998), A78/B103. See Martin Heidegger, *Kant und das Problem der Metaphysik*, Gesamtausgabe, Band 3 (Frankfurt am Main: Vittorio Klostermann 1991), 160-173.

Kierkegaard's theory of synthesis consists in his use of his categories of existence to draw attention to the fact that in my experience of the world around me, I simultaneously experience myself as a self, i.e., an individually existing human being with my own dreams, hopes, desires, and cravings.

Ricœur does not elaborate on the idea of Kierkegaard's further development of Kant's definition of synthesis,[19] but uses the idea to show how we can apply Kierkegaard's critique of Hegel's systematic thinking today.[20]Ricœur considers Hegel's idealistic attempt to conceive of the identity of reality and reason to be a necessary philosophical attempt to constantly articulate and understand that which lies beyond our cognitive reach. We cannot content ourselves with referring to an inexplicable transcendence that will forever remain incomprehensible to us. The task of philosophy – and natural science – lies precisely in the attempt to bring us to an understanding of the incomprehensible. Without holding fast to this fundamental ambition of "an inclusive relationship" in Hegelian philosophy, we lose the opportunity to constantly reconsider the relationship between comprehensibility and incomprehensibility. "On the other hand," Ricœur continues, "this point of view without a point of view, from which one arrives at the deep identity of the real and the rational, the existing and the meaningful, the individual and the discourse, is not given anywhere. It is always necessary, with Kierkegaard, to return to the admission: I am not the absolute discourse. To exist is not to know, in the true sense of the word; the individual is always reborn at the margins of discourse. So, there is a need for another discourse that is aware of this and expresses it" (Ricœur 1992, 43).

It is the necessity of being aware of this "other discourse" in our attempt to arrive at a view of humanity, namely the investigation of the existential diversity of the individual human being, that constitutes the core of Kierkegaard's critique of Hegelian systems thinking. In Hegel's understanding of philosophical work, as Jon Stewart points out, the focus is on the universal explanation of particular cases, and therefore Hegel is "not interested in particulars for their own sake or in the single individual", since these occurrences are "in their details too specific to be objects of science" (Stewart 2003, 637). As I have attempted to show in the previous section, Kierkegaard has nothing against scientific experiments that cut through the confusing diversity of life in order to arrive at objective explanations of

19. Ricœur unfolds his own theoretical attempt to sharpen Kant's definition of synesthesia in *Philosophie de la volonté 2. Finitude et culpabilité: L'homme faillible* (Paris: Aubier 1960), especially 55-63.

20. An extremely thorough treatment of Kierkegaard's complex relationship with Hegel and the Hegelian thinkers of his time can be found in Jon Stewart, *Kierkegaard's Relations to Hegel Reconsidered* (Cambridge: Cambridge University Press 2003).

the individual empirical occurrences. Kierkegaard's criticism is directed exclusively at the moment when the "Hegelian System of Distraction becomes a System of Existence" (SKS 7, 116), which, backed by scientific objectivity, seeks to explain what a human being actually is without considering who a human being is.

A human being is both a "what" and a "who," and—as Kierkegaard writes in *The Concept of Anxiety* – this has "its deepest reason in what is essential to human existence, that man is an individual and as such both himself and the whole species, so that the whole species participates in the individual and the individual in the whole species" (SKS 4, 335). One person's "picture of life" expresses fundamental similarities with that of another person, yet at the same time is fundamentally different from it. I am a human being just like the other person, but who I am makes me different from who the other person is. Our personal ways of being constantly break the systematic "Distraction" that rushes toward a conclusion in its explanation of human beings, for where "the Systematic is the Conclusion that concludes," human existence is "the Spreading that falls apart" (SKS 7, 114).

It is this insistence that the human 'who?' must be included in the scientific attempt to explain humanity that makes Kierkegaard's criticism of natural science perhaps even more relevant today than in his own time. As we saw in the historical sketch in the first section, empirical natural science in Kierkegaard's time failed to construct a real alternative to Christianity's view of humanity. This was because it lacked a coherent explanatory background. This changed drastically with Darwin's theory of evolution, which managed to connect the various scientific findings into a convincing narrative. This laid the foundation for a radically new view of humanity. Whereas Kierkegaard considered Hegelianism's attempt at rationalistic holistic thinking to be the real challenge, and therefore contented himself with haranguing speculative natural science in his private notes, today we face the opposite situation. It is no longer rationalism's attempt to abolish the individual's personal identity in an impersonal explanation that is at the forefront of our view of humanity, but rather a general belief that empirical research in the natural sciences will be able to provide definitive answers to life's unavoidable questions about sorrow, love, responsibility, joy, and despair. Idealism's blind faith in reason's intangible explanation of the complexities of existence has been replaced by a no less blind faith in observation's tangible clarification of our personal problems. The intimate complexities of the mind are increasingly explained by explanations of anonymous synaptic connections,

through colorful images of simultaneous changes in the brain, and not least with the help of genetics' archaeological sense of the functional genetic material of human life.

Reactions to the scientific shift in our approach to human beings are often characterized by two diametrically opposed attitudes: enthusiastic embrace or head-shaking rejection. Despite all their differences, the two attitudes share a crucial common feature, namely their unambiguity. It is precisely in relation to these unambiguous attitudes that we can learn from Kierkegaard's nuanced criticism of natural science. The problem does not lie in our persistent attempts to "understand and interpret the runes of nature." On the contrary, a clearer understanding of nature should only be considered an aid in our efforts to understand why humans can seem so out of step with the nature of which we are each an integral part. The problem with natural science lies instead in the way we apply it. The hope that growing insight into the anonymous highways of nature will lead us to a more tangible understanding of humanity and the challenges of human life must not cause us to overlook the specific human beings whose lives we wish to help with our explanations.