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The starry heavens and the moral law

In what may be his single most famous passage, the first sentence of which was even inscribed on his tombstone, Immanuel Kant concluded his *Critique of Practical Reason* (1788) thus:

Two things fill the mind with ever new and increasing admiration and awe, the more often and steadily we reflect upon them: the starry heavens above me and the moral law within me. I do not seek or conjecture either of them as if they were veiled obscurities or extravagances beyond the horizon of my vision; I see them before me and connect them immediately with the consciousness of my existence. The first starts at the place that I occupy in the external world of the senses, and extends the connection in which I stand into the limitless magnitude of worlds upon worlds, systems upon systems, as well as into the boundless times of their periodic motion, their beginning and continuation. The second begins with my invisible self, my personality, and displays to me a world that has true infinity, but which can only be detected through the understanding, and with which... I know myself to be in not, as in the first case, merely contingent, but universal and necessary connection. The first perspective of a countless multitude of worlds as it were annihilates my importance as an animal creature, which must give the matter out of which it has grown back to the planet [a mere speck in the cosmos] after it has been [one knows not how] furnished with life-force for a short time. The second, on the contrary, infinitely elevates my worth, as an intelligence, through my personality, in which the moral law reveals to me a life independent of animality and even of the entire world of the senses, at least so far as may be judged from the purposive determination of my existence through this law, which is not limited to the conditions and boundaries of this life but reaches into the infinite.

*(Practical Reason, 5:161–2)*
Like many philosophers from the time of René Descartes and Thomas Hobbes onward, Kant tried to explain both the possibility of the new scientific knowledge, which had culminated in the mathematical worldview of Isaac Newton, and the possibility of human freedom. Unlike mechanists and empiricists from Hobbes to David Hume, Kant did not try to reduce human freedom to merely one more mechanism among those of a predictable nature. But unlike rationalists from Descartes to Gottfried Wilhelm Leibniz and Christian Wolff, Kant was not willing to ground human freedom on an alleged rational insight into some objectively perfect world only confusedly grasped by the senses. Instead, Kant ultimately came to see that the validity of both the laws of the starry skies above and the moral law within had to be sought in the legislative power of human intellect itself. It took Kant a long time to transcend the solutions of his predecessors, and perhaps he never fully clarified the nature of his own solution. Nonetheless, the idea to which he was ultimately drawn was the recognition that we can be certain of the foundations of physical science because we ourselves impose at least the basic form of scientific laws upon the nature that is given to us by our senses, yet that precisely because we ourselves impose the basic laws of science upon our world, we are also free to look at the world from a standpoint in which we are rational agents whose actions are chosen and not merely predicted in accordance with deterministic laws of (as we would now say) biology, psychology, or sociology. But in neither case, Kant ultimately came to recognize, is our freedom complete. Although we can legislate the basic forms of laws of nature, and indeed bring those laws ever closer to the details of nature through increasingly concrete conceptualizations, we can do so only asymptotically and must wait upon nature itself to fill in the last level of detail – which, because of the infinite divisibility and extendability of matter in space and time, nature will never quite do. And although we can autonomously legislate laws of reason for our actions, we must ultimately also look to nature, not only outside us but also within us, for cooperation in realizing the ends of those actions.

For Kant, then, his profound recognition of our legislative power in both science and morals, in both theoretical and practical reason, always had to be reconciled with an equally deep sense of the contingency of our success in both theory and practice. Even though he
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was hardly a conventionally religious thinker, Kant retained a sense of the limits of human powers of mind that is often missing from the wilder optimism of some of his rationalist predecessors and idealist successors. In spite of his sense of human limits, however, Kant radically and irreversibly transformed the nature of Western thought. After he wrote, no one could ever again think of either science or morality as a matter of the passive reception of entirely external truth or reality. In reflection upon the methods of science, as well as in many particular areas of science itself, the recognition of our own input into the world we claim to know has become inescapable. In the practical sphere, few can any longer take seriously the idea that moral reasoning consists in the discovery of external norms – for instance, objective perfections in the world or the will of God – as opposed to the construction for ourselves of the most rational way to conduct our lives both severally and jointly. Of course not even a Kant could have single-handedly transformed the self-conception of an entire culture; but at least at the philosophical level of the transformation of the Western conception of a human being from a mere spectator of the natural world and a mere subject in the moral world to an active agent in the creation of both, no one played a larger role than Immanuel Kant.

This extraordinary revolution was accomplished by a most unlikely individual. Unlike his predecessors such as Leibniz or John Locke who were men of means familiar with the corridors of power in the great European capitals and active in the political and religious struggles of their day, Kant was born into narrow straits in a small city virtually at the outermost limits of European civilization. Although Königsberg, where Kant was born into an artisan family in 1724, was a Hanseatic trading city with British connections as well as the administrative center of East Prussia, it was hardly London or Paris or Edinburgh or Amsterdam [the German city of Königsberg no longer exists, having been leveled in World War II and replaced with the Russian naval base Kaliningrad]. Its university, which Kant entered at the age of sixteen after a preparatory education financially supported by the family’s Pietist pastor and where he then spent most of his life, was barely more than a glorified high school, and even so Kant had to struggle in the poverty of a Privatdozent paid by the head [he quickly learned how to make his lectures very popular, however] until he was finally appointed to a proper chair in metaphysics at the
age of forty-six. And after the decade of frequent publication that led to that appointment in 1770, Kant fell into a decade of silence that must have persuaded many that his long wait for a chair even at such a provincial university had been fully deserved. Yet from this dreary background there erupted a philosophical volcano the likes of which the world has rarely seen. Beginning in 1781, when he was already fifty-seven years old, Kant published a major work almost every year for more than a decade and a half. Foremost, of course, are his three great Critiques, the *Critique of Pure Reason* (1781, substantially revised in 1787), offering a new foundation for human knowledge and demolishing virtually all of traditional metaphysics; the *Critique of Practical Reason* (1788), inextricably linking human freedom to the moral law while attempting to reconstruct the most cherished ideas of traditional metaphysical belief on a practical rather than theoretical foundation; and the *Critique of the Power of Judgment* (1790), ostensibly bringing the seemingly disparate topics of aesthetic and teleological judgment into Kant’s system but also struggling to refine and even substantially revise some of Kant’s most basic conceptions about theoretical and practical reason and the relation between them. But these works were accompanied by a flood of others: In the *Prolegomena to Any Future Metaphysics That Shall Come Forth as Scientific* of 1783, Kant attempted to make the ideas of the first Critique accessible to a broader public while defending them from the first onslaught of criticism. He wrote several essays on the nature of enlightenment and the role of reason in history, including “Ideas towards a Universal History” and “What Is Enlightenment?” in 1784 and the “Conjectural Beginning of Human History” and “What Does it Mean to Orient Oneself in Thought?” of 1786. In the *Groundwork for the Metaphysics of Morals* of 1785, he made his boldest brief for the purity of the moral law and the certainty of human freedom. In the *Metaphysical Foundations of Natural Science* of 1786, he attempted to reconstruct Newtonian physics on the *a priori* basis offered by the principles of human knowledge demonstrated in the *Critique of Pure Reason*. In *Religion within the Boundaries of Mere Reason* of 1793 and *Conflict of the Faculties* of 1798, Kant argued firmly for the primacy of philosophy over religion in both its theoretical and institutional forms. And finally, in 1797, in the work at which he had been aiming most of his life, the *Metaphysics of Morals*, divided into a *Theory of Right* or political philosophy and *Theory of Virtue* or normative ethics, Kant demonstrated that his
formal principle of morality justifies the use of coercion in the state yet simultaneously places strict limits on the ends the state can justifiably pursue by coercive means. He also demonstrated that the same principle implies a detailed series of ethical duties to ourselves and others that go beyond the limits of positive legislation in such a state. Even after all this work had been done, Kant continued to work at the foundations of scientific theory, trying to bring the basic principles of the Metaphysical Foundations of Natural Science into closer contact with physical reality, as well as with the latest advances in the sciences of chemistry and physics. The book that was to result from this work, however, remained incomplete before the wane of his powers and his death a few weeks short of his eightieth birthday in 1804. [The surviving sketches of this work have been known as the Opus postumum since their publication early in the last century.] Any one of these works – produced in spite of a daily load of three or four hours lecturing on subjects like anthropology and geography as well as metaphysics, ethics, and rational theology – would have made Kant a figure of note in the history of modern philosophy; together, they make him the center of that history.

As the whole of the book that follows can serve as only an introduction to the great range of Kant’s work, it would certainly be hopeless to attempt to introduce the reader to all of it here. What follows will be only the briefest of sketches of the evolution of Kant’s thought to help the reader situate what is offered in the essays of this collection.

Kant first came to attention with several scientific works: on graduation from the university in 1747 he published On the True Estimation of Living Forces, a piece on the debate between Leibnizens and Cartesians on the proper measure of forces; and at the time of his return to the university as a Privatdozent in 1755, after eight years as a household tutor for several East Prussian landowners, he published two more scientific works, the Universal Natural History and Theory of the Heavens, in which he showed how a system of heavenly bodies could have arisen out of an unformed nebula by purely mechanical means (what later became known as the Kant–Laplace cosmology), as well as a less important Latin dissertation on fire. In that same year he also published his first philosophical work, another Latin treatise, the Principiorum primorum cognitionis metaphysicae nova dilucidatio or New Elucidation of the First Principles of Metaphysical Cognition. This treatise, only
thirty pages in length, is pregnant with Kant's philosophical future, for in it Kant revealed what was to become his lifelong preoccupa-
tion with the fundamental principles of natural science on the one
hand and the problem of human freedom on the other. The positions
for which the then thirty-one-year-old philosopher argued were far
from his mature positions, but of great significance nonetheless. On
the theoretical side, Kant accepted the basic rationalist enterprise of
deriving the principle of sufficient reason from purely logical consid-
erations (although he departed from the details of the proofs offered
by Wolff and his follower Alexander Gottlieb Baumgarten, on whose
textbooks of metaphysics and ethics Kant was to lecture for his entire
career), but he also tried to show that this principle led to results
precisely the opposite of those Leibniz and his followers had drawn
from it. In particular, manifesting his future concern with the jus-
tification of the concept and principle of causation long before he
had become familiar with Hume, Kant argued that the principle of
sufficient reason implied rather than excluded real causation and
interaction among substances, and that it even gave rise to a refuta-
tion of idealism. In this work Kant also introduced the first version
of his critique of the ontological argument, that paradigmatic ratio-
nalist attempt to move directly from the structure of concepts to
the structure of reality itself. On the practical side, Kant took the
side of Leibnizian compatibilism between free will and determinism
rather than the radical incompatibilism of the anti-Wolffian Pietist
philosopher Christian August Crusius. (Kant's mature work on free-
dom of the will consists of a perhaps never quite completed attempt
to reconcile the Leibnizian insight that we can only be responsible for
actions produced in accordance with a law with the Crusian insight
that responsibility requires a radical freedom of choice not compat-
ible with the thoroughgoing predictability of human action.) Kant's
major works of the 1750s were completed with another Latin scien-
tific treatise, the Physical Monadology, in which he introduced the
conception of attractive and repulsive forces that was to be essential
to his attempts to provide a foundation for physical theory for the
remainder of his life.

The philosophical work of the 1750s pointed Kant in the direction
of a number of conclusions he subsequently wanted to establish. It
turned out, however, that this work could not serve as a foundation
for the later version of those conclusions, because Kant came to reject
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completely the rationalist methodology on which that work was based. Much of the 1760s was devoted to the demolition of rationalism, particularly of its two assumptions that all philosophical principles could be discovered by essentially logical methods alone and that the principles thus arrived at automatically give us insight into the ontology of objective reality. Kant's search for an alternative philosophical method in this decade was less successful than his demolition of all previous methods, however. In a work published in 1763, *The Only Possible Argument in Support of a Demonstration of the Existence of God*, Kant deepened the critique of the ontological argument already suggested in 1755. He accompanied that critique with an attack upon the two other forms of proof of the existence of God that had still enjoyed currency in eighteenth-century debates: the argument from the existence of a contingent creation to some necessary cause of it (what he called the “cosmological” argument), and the argument from design, according to which the orderly form of the world we observe around us can be explained only by the activity of an intelligent designer (what he called the argument from “physicotheology”). Yet Kant still argued that there was an *a priori* proof for the existence of God available, which had been overlooked by his predecessors: God could be demonstrated as the necessary ground of even the mere possibility of existence. Kant's confidence in this argument turned out to be a last gasp of rationalism. Later that same year, in his *Attempt to Introduce the Concept of Negative Magnitudes into Philosophy*, Kant introduced a fundamental distinction between *logical* and *real* opposition—a distinction of the kind that exists between a proposition and its negation on the one hand, and two physical forces trying to push a single object in opposite directions on the other. He intimated not only that this could be extended into a general distinction between logical and real relations, but also that all causal and existential relations would have to be understood as real rather than logical relations, and so could never be demonstrated by any purely logical means alone. But this result, reminiscent of Hume but more likely to have been influenced by Crusius at this point in time, left room for the conclusion that philosophy could have no distinctive nonanalytical yet not merely empirical methodology at all, a danger evident in Kant's essay *Inquiry concerning the Distinctness of the Principles of Natural Theology and Morals* published the following year (1764). Here Kant argued that, contrary
to the dream of all rationalist philosophers since Descartes, philosophy could not use the same method as mathematics. Mathematics could begin with definitions and then prove indubitable results by constructing objects in accordance with those definitions and performing various operations upon them; philosophy, however, could never begin with definitions but only with “certain primary fundamental judgments” the analysis of which could lead to definitions as its conclusion, not its commencement. The origin and source of the certainty of these fundamental judgments remained obscure. In language reminiscent of both Crusius and British moral sense philosophers such as Francis Hutcheson (both of whom were influential for Kant at this time), he could say only that metaphysics had to begin with “certain inner experience, that is, by means of an immediate evident consciousness” that could give reliable information about the nature of a reality without immediately yielding “the whole essence of the thing” (2:286). At this point, it seems fair to say, Kant had hardly replaced the rejected method of the rationalists with a concrete proposal of his own for grounding first principles of either theoretical or practical reasoning.

This embarrassment remained evident in Kant’s peculiar Dreams of a Spirit-Seer of 1766, which engaged in a lengthy examination of the spiritualist fantasies of the Swedish mystic Emanuel Swedenborg for the polemical purpose of showing that rationalist arguments for the simplicity, immateriality, and immortality of the soul offered by such philosophers as Wolff and Baumgarten were not any better grounded in empirical evidence. Like the essay Negative Quantities, the Dreams of a Spirit-Seer then concluded with the negative result that only empirical claims about “relations of cause and effect, substance, and action” could serve as starting points for philosophy, “but that when one finally comes to fundamental relations, then the business of philosophy is at an end, and we can never understand through reason how something can be a cause or have a force, but these relations must merely be derived from experience” (2:370). However, Kant completed this work with one point that was to remain unchallenged in all his subsequent thought about morality. All the metaphysical attempts to prove the immortality of the soul have been motivated by the need to allow for the reward of virtuous deeds performed in ordinary life, he argued, but are entirely unnecessary because only a morality that can motivate us to perform our duty
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without either promise of reward or fear of punishment is truly virtuous. Kant asked,

Is it good to be virtuous only because there is another world, or are actions rather not praised because they are good and virtuous in themselves? Does not the heart of man contain immediate moral precepts, and must one in order to motivate his disposition in accordance with all of these here always set the machinery of another world to work? Can one properly be called upright and virtuous who would gladly yield to his favorite vices if only he were not terrified of a future punishment, and would one not rather say that he avoids the expression of evil but nourishes a vicious disposition in his soul, that he loves the advantage of the simulation of virtuous action but hates virtue itself?

Obviously these questions needed no answer; so Kant could conclude that it is “more appropriate for human nature and the purity of morals to ground the expectation of a future world on the sensations of a well-disposed soul than to ground its good behavior on the hope of another world” (2:372–3). This insistence that virtue must move us by itself and that faith in religious doctrines of immortality and providence must not be the basis for morality but only a consequence of it were to reverberate in Kant’s work for the rest of his life.

The Dreams of a Spirit-Seer thus reduced the need for a new method for metaphysics by freeing morality from the need for a positive metaphysical foundation altogether, although Kant was subsequently to recognize that morality requires at least a metaphysical proof that freedom is not impossible and that at least a “groundwork” for the metaphysics of morality was required. And the task of providing certain foundations for the Newtonian worldview without appealing to the method of mathematics still remained. Kant took a first step toward providing the latter if not the former in his next two works, an essay Concerning the ultimate Ground of the Differentiation of Directions in Space in 1768 and the dissertation On the Form and Principles of the Sensible and Intelligible Worlds, which he defended on his inauguration, at long last, as Professor of Metaphysics in 1770. In the first of these, Kant argued that the fact that two objects such as right- and left-handed gloves or screws could be described by identical conceptual relations but nevertheless be incongruent demonstrated that their orientation toward the axes of an absolute space was an irreducible fact about them, and
thus proved the validity of the Newtonian conception of absolute space rather than the Leibnizian reduction of space to more primary and independent properties of substances. But the metaphysical possibility as well as the epistemology of Newtonian absolute space remained a mystery until Kant solved it in the inaugural dissertation by arguing that the human mind possesses two fundamentally distinct capacities of sensibility and intellect, not the single faculty for more or less clear and distinct thought that Leibniz and Wolff and all their followers had supposed, and that the existence of a unique and absolute space – and time – in which all the objects of our experience can be ordered reflects the inherent form of our capacity for sensible experience itself. Thus Kant took the fateful first step of arguing that the possibility and indeed the certainty of the spatiotemporal framework of Newtonian physics could be secured only by recognizing it to be the form of our own experience, even though this meant that the certainty of the foundations of Newtonian science could be purchased only by confining them to objects as we experience them through the senses – “appearances” or “phenomena” – rather than those objects as they might be in themselves and known to be by a pure intellect – “noumena.” Thus Kant argued that absolute space is “not some adumbration or schema of the object, but only a certain law implanted in the mind by which it coordinates for itself the sensa that arise from the presence of the object” (§4, 2:393). As for the further principles of the scientific worldview as well as the metaphysics of morality, however, the Dissertation did not merely fail to demonstrate any progress, but in some ways even regressed from the critical position of the 1760s. A metaphysical insight that all of the substances of the world constitute a single whole could be grounded, Kant claimed, in intellectual insight into their dependence on a common extramundane cause (God, of course). More purely intramundane or immanent foundations for science, such as the maxims that “All things in the universe take place in accordance with the order of nature,” “Principles are not to be multiplied beyond what is absolutely necessary,” and “No matter at all comes into being or passes away,” he could only introduce as mere “principles of convenience” (§30, 2:419). Morality, finally, Kant was suddenly prepared to treat as a matter requiring metaphysical, indeed “dogmatic” insight into “some exemplar only to be conceived by the pure intellect and which is a