The Intelligible World

The Intelligible World: Metaphysical Revolution in the Genesis of Kant's Theory of Morality

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INTRODUCTION

In his argument for the value of reading the early works of Immanuel Kant, in *The Philosophy of the Young Kant*, Martin Schönfeld replies to four reasons for *not* doing so. These early works, according to various accounts, lack originality; are discontinuous with the position of the later, "critical" Kant; deal mostly with issues that have become obsolete as a result of later philosophical developments; and lack coherence even among themselves. Lewis White Beck summarizes the general opinion of Kant scholars in supposing that had Kant died around 1770, before the writing of the three great Critiques, his work would hardly even deserve a page in a standard history of philosophy.[1]

Not so, Schönfeld argues, for Kant's elaborations of Newtonian science and metaphysics, the preoccupation of his early works, are indeed original. Kant creatively revises Newtonism while soundly criticizing the Leibniz-Wolff "School Philosophy" that constituted his own philosophical heritage. True, there is much that is obsolete, such as Kant's early conceptions of cosmic teleology, physical monadism, and arguments for the existence of God. Nevertheless, his achievements in natural science during this early period are worthy of note, while his metaphysical advances involve "contributions that would survive him", including an alternative theory of causality to that of occasionalism and pre-established harmony; his compatibilism regarding freedom and determinism; his criticisms of the ontological argument for the existence of God; and his reasoning that "linguistic analysis ought to be the foundation for aprioristic constructions".[2]

As for the apparent inconsistencies within Kant's early writings, there is a clear "pre-critical project" involving the reconciliation of natural science and metaphysics, which were, at the time of Kant's writing, in danger of going their separate ways—as they eventually did after Kant, and thanks in some measure to his own later work. Kant's pre-critical project clearly failed, as Kant recognized with great pathos in his *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics* (1766). Here, Kant abandons his early metaphysical aspirations, and so clears the ground for the metaphysical revolution of the *Critique of Pure Reason* which establishes "the synthetic *a priori* as the hallmark of metaphysical propositions".[3] It is the story of this collapse of the early project that in

fact provides the continuity between the early and later periods. Schönfeld summarizes that for the later Kant of the first Critique[4]

> … metaphysics has been an all-out failure. It is, as Kant remarked, 'a combat area … in which not one fighter has ever been able to gain even the smallest territory and to base upon his victory a lasting possession' (B xv). In contrast to the procedure of natural science, the 'procedure of metaphysics has been a mere groping about, and—worst of all—a groping about among mere concepts'. (B xv).

Schönfeld clearly establishes that there is indeed more to the early works than Kant is usually given credit for. For a diligent student of the history of philosophy, this argument provides motivation for reading Schönfeld's informed and detailed account of the early works, or at least those which he regards as central to his understanding of the "pre-critical project". And yet, it takes a certain amount of masochism for the general reader to engage in a reading that promises merely an account of an interesting failure. Hence, Schönfeld assures his audience that they will be entertained in the process. For those who have waded through the turgid prose of the Critiques, this is solace indeed. Schönfeld concludes his argument for the importance of Kant's early works:[5]

> Kant's philosophical development is a story full of high hopes and great drama. In the pre-critical period, he revealed little of the conservative, circumspect caution so typical of his later work. Sometimes crudely, but always in bright colours, he painted with bold strokes a picture of reality that is enchanting in its beauty and tantalizing in its promise. Ultimately, the promise remained unfulfilled, and Kant's fall from hope was hard indeed. But throughout the meanderings of Kant's early journey, one notices an extraordinarily creative mind at work, a mind with an uncanny knack for combining ideas. Already in the pre-critical period, philosophy was pushed to levels never attained before.

From what has been said so far, one could be surprised by this last sentence. This is high praise indeed: in his pre-critical period, Kant pushes philosophy to levels never seen before. So what, then, if Kant proceeds to exceed even himself as he moves on to ever greater achievements? A knowledge of the pre-critical philosophy should therefore be worthy of attention, on a par with knowledge of Plato and Aristotle, Descartes and Hume, in the standard histories of philosophy, and certainly deserving far more than a half page in an erudite account of philosophical miscellanea.

But nothing in the previous account of the plusses and minuses of Kant's pre-critical works, and ultimately of its complete abandonment by

Kant himself, prepares us for this conclusion. To appreciate the conclusion, one would have to have a high respect for the Wolff-Leibniz school philosophy that Kant inventively criticizes. But as the "School Philosophy" is not presented with sympathy, Kant's triumphs in terms of his immediate predecessors hardly seem compelling.

The philosophical world, it seems, has moved on from the time of Kant, and we look back with a tranquil gaze untroubled by the outmoded issues with which Kant grappled—issues such as the origin and purpose of existence. We have replaced this worry, apparently thanks to Kant himself, with functional explanations and linguistic analysis. Kant's pre-critical works were "a last-ditch effort"[6] to rescue metaphysics from the encroachment of natural science. If they constitute a high point in terms of his philosophical ancestors, it nevertheless has little importance for us today. For thanks to their having climbed the ladder of philosophy, we ourselves can dispense with the once arduous, and perhaps colourful, efforts of our predecessors.

But is it really true that Kant abandoned his pre-critical project? Or did he come to see it in a new way? Schönfeld argues that dismissal of the early works of Kant by scholars was in part due to Kant's own evaluation of failure. Did not Kant refer to his critical perspective as a revolution on a par with the Copernican revolution in science? Did he not ask his editor to omit his early works? And yet his early work, *Observations on the Feeling of the Beautiful and the Sublime* (1764), went through eight printings in his lifetime.[7] Schönfeld regards this work as outside the pre-critical project, but perhaps Kant's pre-critical perspective was much broader than the attempt to square Newton with metaphysical reason.

Late in his career, in 1790, Kant could say that "*The Critique of Pure Reason* can thus be seen as the genuine apology for Leibniz".[8] Respect for the philosophy of Leibniz not only marks the beginning of his career, but was also acknowledged up to the end. Kant does not turn his back on previous philosophy because of his "revolution", but grows in appreciation of the accomplishments of his predecessors. Kant's "apology," he goes on to write, extends to[9]

> … many different past philosophers, to whom many historians of philosophy only attribute mere nonsense. Such historians cannot comprehend the purpose of these philosophers because they neglect the key to the interpretation of all products of pure reason from mere concepts, the critique of reason itself (as the common cause of all these concepts). They are thus incapable of recognizing beyond what the philosophers actually said, what they really meant to say.

Kant learns that his great predecessors were themselves engaged in the critique of pure reason. Far from breaking with past philosophy, he comes to penetrate further and further into its inner meaning. His critique is not about abandoning the products of pure reason, and so traditional metaphysics, but about their "interpretation". It is the method or "procedure" employed in metaphysics, not the overall effort, that needs to be revolutionized if we are to avoid grasping at empty concepts.

1790 is the date of the publication of the *Critique of Judgment*, and thus the completion of his systematic philosophy consisting of three critiques. Each of his three critiques addresses a central philosophical question, which Kant enumerates in his first Critique: "1. What can I know? 2. What ought I to do? 3. What may I hope?"[10] The third Critique addresses the issue of hope. In Kant's pivotal work, *Dreams of a Spirit-Seer*, where Schönfeld finds that Kant "lost heart and admitted defeat,[11], Kant writes that[12]

> … the scales of the understanding are not, after all, wholly impartial. One of the arms, which bears the inscription: *Hope for the future*, has a mechanical advantage; and that advantage has the effect that even weak reasons, when placed on the appropriate side of the scales, cause speculations, which are in themselves of greater weight, to rise on the other side. This is the only defect, and it is one which I cannot easily eliminate. Indeed, it is a defect which I cannot even wish to eliminate.

Certainly, pure theoretical reasoning, the hallmark of the old metaphysics, cannot justify hope for the future in the same way that empirical data justifies the theory of universal gravitation. The arguments of the materialists, who condemn the human individual to mortal ashes in the name of such empirical data, appear to have behind them the more solid grounds of empirical science. As a result of his belated recognition of this problem, Kant engages in three interrelated Critiques to provide an alternative justification for hope. The winding paths of these critiques move towards the goal that at one time Kant regarded as the conclusion of a straighter, more direct approach. Kant does not lose hope, nor does he replace metaphysics with a study of the a priori syntheses of subjective human consciousness. Rather, he replaces pure theoretical grounds for hope with practical grounds, practical grounds which in turn provide the basis for the new theoretical approach of the third Critique.

Schönfeld writes that "Kant finally divorced himself from metaphysical concerns in 1772".[13] He recognizes, nevertheless, that the old metaphysics is not entirely abandoned but preserved "more tenuously as postulates".[14] But, far from being established more tenuously, Kant believed that his

practical arguments involving the postulates of morality provide more reliable, sounder grounds for a metaphysics of hope by circumventing the contentious, interminable arguments of pure theory. Such theory nevertheless keeps an important place in the new metaphysics, for it established the rational coherence of the metaphysical ideas, and their compatibility with the data of science. Kant's arguments for the postulates are stated briefly in the section of the *Critique of Practical Reason* entitled, "the Dialectic of Pure Practical Reason". For a more complete understanding of the meaning of this dialectic, we need turn back to his pre-critical works where he provides not only detailed conceptual analyses involving ingenious combinations of ideas, but also a vista of human possibility that is both enchanting and tantalizing. There is no "fall from hope" in this regard, but rather a new way of grounding such hope in the inevitable metaphysical choices of the moral agent.

Has philosophy nowadays abandoned the enchanting metaphysical horizons of an earlier time for up-to-date, if prosaic, linguistic analyses? Are we to turn to Kant's pre-critical works to find an enchanted universe, only to acquiesce ultimately in the judgment of "the sober Scot" David Hume that metaphysical speculation must be consigned to the flames?[15] It was the threat of such consignment that woke Kant from his dogmatic slumber, and spurred him on to new efforts to save his beloved metaphysics from a destructive empiricism. Schönfeld recognizes that the pre-critical project of Kant continues in "post-Kantian thought, as the systems of Schelling, Hegel, and Schopenhauer so colourfully illustrated".[16] But it seems that "colour" has now become obsolete, whether it be found in the broad and tantalizing strokes of Kant's early writings, or in his Germanic successors who continued this metaphysical quest—not despite Kant, but because of him.

Schönfeld is right to reject the notion of a "dualistic Kant … an inept writer who zigzagged off into all kinds of wrong directions, only to backtrack later on—and then, a genius, who serenely built the architectonic edifice of the critical system".[17] But his own picture of Kant's development, centred on the failure of the pre-critical project, only slightly improves that picture. If the pre-critical project provides in bold and colourful strokes a hope-filled enchanted vista, the critical project is only a more carefully constructed edifice for defending and housing that same vision. If one succeeds in penetrating the battlements and buttresses of the carefully constructed fortress of critical reason of the later Kant, one can still find within the same colourful windows with enchanting designs that mirror the brilliance of his youth.

Notes

[1] Martin Schönfeld. *The Philosophy of the Young Kant: The Pre-critical Project* (Oxford: Oxford University Press, 2000), 6.
[2] Ibid. 7.
[3] Ibid., 4.
[4] Ibid., 11. The citations are from the translation of Kant's *Critique of Pure Reason* by Werner Pluhar, Indianapolis-Cambridge: Hacket, 1996.
[5] Ibid., 14.
[6] Ibid.
[7] John H. Zammito. "Kant in the 1760s: Contextualizing the "Popular" Turn, in Predrag Cicovaci, ed., *Kant's Legacy: Essays in Honor of Lewis White Beck* (Rochester, NY: University of Rochester Press, 2001), 399.
[8] Immanuel Kant, "On a Discovery According to which Any New Critique of Pure Reason Has been Made Superfluous by an Earlier One," in Henry E. Allison, ed., *The Kant-Eberhard Controversy* (Baltimore and London: The Johns Hopkins University Press, 1973), 160.
[9] Ibid.
[10] Immanuel Kant. *Critique of Pure Reason*, tr. By Norman Kemp Smith (London: Macmillan & Co. Ltd., 1961) 635; A 804-805; B 832-833. This text, with pagination the Smith edition, is available on the Internet at http://www.hkbu.edu.hk/~ppp/cpr/toc.html (text originally prepared by Stephen Palmquist and placed in the Oxford Text Archive in 1985; accessed on August 22, 2006.)
[11] Schönfeld, op. cit., 14.
[12] Immanuel Kant. *Dreams of a Spirit-Seer Elucidated by Dreams of Metaphysics*, in *Theoretical philosophy, 1755-1770;* translated and edited by David Walford, in collaboration with Ralf Meerbote (Cambridge; New York: Cambridge University Press, 1992), 2:349-50; 337.
[13] Schönfeld, op. cit., 9.
[14] Ibid., 7.
[15] Ibid., 13.
[16] Ibid., 8.
[17] Ibid.

CHAPTER ONE

THE UNIVERSAL BOND OF LOVE

Revolution in Modern Science

Two camps of scientific philosophy evolved as a consequence of the revolutionary development of modern science in the sixteenth and seventeenth centuries with the discoveries of Copernicus and Galileo, and eventually Newton, Kepler, and others. Scientific thought today is largely dominated by the materialist camp, which attempts to explain human consciousness on the basis of deterministic laws of physics and in accord with other discoveries in the physical, psychological, and social sciences. But equally important to the history of modern Western philosophy is the spiritualist camp, which argues that the modern scientific discoveries could have taken place only through the ingenuity of the human mind itself. Rather than putting the spotlight on the newly uncovered *objective* laws, stressed primarily in the British tradition of materialism and empiricism, the rationalist/spiritualist philosophers of the European continent emphasized the *subjective* conditions for the uncovering of these laws by creative human thought itself.[1]

Each of these camps reflects on the fundamental novelty of modern science by comparison with the sciences of ancient and medieval times. Against the astronomy of Aristotle, Ptolemy, and the European middle ages, Copernicus argues that, contrary to the appearances of ordinary perception, the sun does not move around an unmoving earth. It is the earth that is in motion, while the sun, in respect to this motion, is the body that is still. Because this idea has become such a commonplace in contemporary culture, it is difficult for us now to appreciate the tremendous impact this idea once had on the culture of the time of its discovery. It is difficult to appreciate how radically it contradicts ordinary experience even in our own lives. We still see the sun rise up over the horizon, pass through the vault of the sky, and sink into the west. But because we firmly share the conviction that this isn't what *really* happens, we rarely think today about this discrepancy between appearance and reality.

Equally important to this revolution in astronomy was the more subtle revolution in physics inaugurated by Galileo, who demonstrated, against two thousand years of Aristotelian physics, that there is no such thing as natural motion. According to Galileo's law of inertia, a moving object will continue in motion at an unchanging speed forever in whatever direction it is presently moving—unless or until some other object interferes with that motion and causes a change. As with the appearance of the movement of the sun, we are also deceived by the appearances of earthly movements. Heavy objects do not naturally fall downward, as Aristotle thought and as seems to be what takes place before our eyes. Rather they must be pulled down by an invisible force of gravity. From childhood on we post-Galilean moderns have become familiar with the idea that objects do not fall because of their own inherent heaviness, but because of an invisible force of the earth pulling on them, and without which, we must suppose, they would stay suspended in midair!

The two camps in philosophy emerged out of reflection on these first steps in the revolutionary development of modern science. The British philosopher Hobbes took the inertial motion of Galileo's physics as grounds for rejecting the idea that human beings have free will. In debate against Bishop Bramhall, who defended the traditional Christian philosophy on this issue, Hobbes argues that anyone who understands the new science of motion must recognize that free will is impossible. If by an undetermined act of free will—by a mere act of thought—I can choose to move my arm in this direction rather than that, the physical law discovered by Galileo would have to be rejected. For this law, *all* motions, including the movements of the human body, must be the result of outside material causes.

The other camp was founded by Descartes, who recognized that the ultimate foundation of modern science must be sought first of all in thinking itself. This is more than the obvious tautology that to have any science it is necessary that there be thinking beings. The new sciences presuppose a special power of human thought: the ability of the thinking mind to break away from the misleading appearances of direct sense experience, and reorganize the data of experience according to a scheme or construction produced by thought itself. But this implies that the ultimate foundation of modern science cannot be the deterministic movement of matter—the so-called law of causality—but the free creativity of the human spirit. For modern science to be possible, Descartes argues, the human spirit must be capable of penetrating the darkness of ignorance and illusion that naturally surrounds us thanks to its participation in the God-like light of consciousness. The ultimate source of science is therefore not

the inertial movement of matter or the law of causality, but the enlightened and enlightening power of the human spirit.

And so the apparent determinism of matter must be surmountable. According to Hobbes, human beings are driven by their desires and interests, the internal causes of the motion of human beings that arise out of nature, environment, and education, through a chain of external causal forces. Descartes argues, on the contrary, that the human mind is capable of redirecting the drives, desires, or passions that arise out of natural and social causes, and that give rise to the illusions that naturally or spontaneously dominate consciousness. Such a capacity to consciously direct the energies of life is continuous with the power of the human mind, at the basis of the new sciences, to creatively rethink and re-imagine the nature of existence. Conscious, purposeful redirection of the mind in relation to externally stimulated passions and desires requires an antecedent redirection of thought from immediate perceptions and illusory conceptions by means of a scientific rethinking of these impressions and conceptions. Thanks to an authentic scientific understanding, the free human individual is able to redirect the focus of her mind from one object to another, and so awaken new desires and channel her energies in new, more fruitful directions.

Social philosophy was equally divided between the two camps. Consistent with his materialism, Hobbes takes the physical individual, whose consciousness is centred primarily on his or her own individual interests, to be the building block of society. This perspective culminates in the thought of Adam Smith, according to which the wealth of nations is assured when each person focuses on his or her individual well-being, without any deliberate concern for the social whole. The "moral sentiment" of a dispassionate observer paradoxically applauds the results of a "system of natural liberty" that is motivated by non-moral self-interest.

Consistent with his starting point in the free movement of conscious spirit, Descartes argues that while possession of material goods separates individuals, communication of ideas unites them. Just as the spirit of the individual is able to direct the passions of the body, the shared goods of spirit, starting with science itself, provide the ultimate foundation on which material goods should be distributed. The development of this idea culminates in Kant's eventual subordination of theoretical reason, with its emphasis on the deterministic laws of science, to practical reason or morality, with its subordination of individual self-interest to the community of free individuals which he calls the Kingdom of Ends. This book examines the philosophical revolution that took place in Kant's own

progress to this conclusion. In calling the mature philosophy of his famous three Critiques a Copernican revolution in philosophy, Kant was simply saying that his philosophy provides a more fully considered expression of the fundamental implications of the new sciences, while building on the efforts of the great philosophers of modern times, his predecessors.

From Spirit to Matter: Descartes's Starting Point

The starting point for a truly scientific philosophy, Descartes argues, is the free capacity of the mind to break from the illusions of ordinary experience and actively construct a system of concepts that mirrors the true order of reality. This is what Copernicus implicitly did when he recognized that the ordinary perceptions of experience are fundamentally misleading. The sun does not revolve around the earth, as it appears to do. It is the earth, and the human thinker upon it, that revolve around the sun. Only by becoming conscious of the nature and potential of one's own free activity can the thinking person break from the illusions of ordinary experience. The ability of human self-conscious and self-moving thought, free from determination by outside causes or sensory stimuli, to reorganize the data of experience according to a systematic method provides the ultimate foundation for real science—for the authentic science of modern times.

The chief obstacle to fully appreciating this centrality of free human thought is the apparently mechanistic character of physical law itself. How can the mind be free if the body is governed by the mechanistic law to which Hobbes pointed? Newton gave Galileo's law of inertia its classical formulation in his first law of motion—that every body remains at rest or continues in uniform motion in a straight line until some other body, coming into contact with it, causes it to change. All change is therefore externally caused. All causality is external causality, and so nothing causes itself to move. A philosophy of mechanistic materialism seems implicit in this basic law of the new physics. For anyone who understands the new science of motion, as Hobbes says, it seems that there can be no such thing as free will—i.e. the freedom to direct the very energies of existence in a consciously self-determining way.

But without the theoretical ability on the part of human thought to break from the impressions of sensation—those external causes of the motion of the mind—modern science would not be possible. This is the other, subjective side of the new coin of modern science, which is brought into the foreground of philosophy by Descartes. It has a practical implication as well as a theoretical one. Without the practical ability of the

individual to freely direct the human body, all claims to authentic freedom on the moral plane must be an illusion. Practical human life, as well as science itself, requires freedom of the will from external causality. Truly scientific thought therefore requires that the human mind or spirit be self-determining. But human self-determination contradicts the apparent determinism of natural science. And yet it cannot be the case that the very foundation of scientific thought in the freedom of the mind is contradicted by a basic law uncovered by that thought.

How To Explain Mind-Body Interaction?

Descartes agrees with Hobbes that passion or desire, stemming from the nature of the body, provides the physical energy that fuels human behaviour. But he also recognizes that the free movement of the mind can elicit and regulate the force of desire. For example, a person who is in the grip of a powerful or addictive desire can free himself by redirecting his mind to some other desirable object or state of affairs and thereby elicit a new desire and eventually a stronger passion capable of replacing the undesired one. Thus while the forces of physical desire profoundly influence the mind, the mind in turn can redirect the movements of the body.

The chief difficulty in formulating a coherent theoretical understanding this interaction of mind and body stems from what seem to be radical differences in their natures. Descartes argues that matter and spirit are radically different substances. If matter is governed by external causality, as the new science of physics seems to establish, the mind that is capable of self-direction must be immaterial. Matter is extended in space, but mind occupies no space. Material objects are made up of separate parts, but the "I" that is always aware of itself is an indivisible unity, with no left or right sides. Consequently, Descartes argues that matter and spirit, body and soul, are two radically different substances, and so spirit or consciousness is irreducible to matter. Since death is the division or disintegration of the body, Descartes thereby establishes the possibility of immortality for the indivisible soul.

But if the mind is immaterial, how does it operate on the material body? The answer to this question, Descartes writes in private correspondence, was never his concern, and perhaps transcends the possibilities of metaphysical thought altogether. His basic philosophical goal is to establish the *distinction* of mind and body. Ordinary human experience is sufficient for affirming their *unity*. To Princess Elizabeth of Bohemia, who was bothered by this problem, Descartes advises that she

follow his practice of spending very little time in abstruse metaphysical reflections, and most of her time in the simple enjoyment of life. In her own sensuous experience of nature she will enjoy the unity of body and soul that characterizes the human being.[2]

The chief Cartesian of the late seventeenth century, Nicolas Malebranche, rejected Descartes's own position. Contrary to the sensuous experience of mind-body unity affirmed by Descartes himself, Malebranche reasons that as mind and body are radically different substances, they are incapable of interacting. For how can the individual move his body if he has no idea how he does this? I can be said to do something only if I know what I am doing. I know the steps I need to take in order to pull down a building, and so I can say that I am really able to perform this action. But when I will to move my body, this fundamental presupposition of any action whatsoever, I am completely in the dark. For all I really know about the matter is that when I incline my thought and will in a certain way my body marvellously moves in the way I intend. When I really think about it, the fact that I can move my body by thinking and willing seems miraculous. In fact, that's just what it is, says Malebranche. *On the occasion* of my willing to move my arm, a power greater than myself Who does know what He is doing, God Himself, must intervene to move it. What *appears* to be the interaction of mind and body is actually brought about by the intervention of God.

Malebranche similarly extends his "occasionalism" to material motion in general. Even bodies do not move each other—for if all bodies are moved by outside forces, how can any one body be said to move another one? If no body moves itself, as Newton states in his first law, how can one body really be moved by another body that has no inherent power of movement of its own? The inertial substances of the material world therefore are also incapable of real causation. Causality is a creative force for movement and change which can only be properly assigned to a true Creator. And so although everything happens in accordance with the strict physical laws of the new sciences, the real underlying cause of such motions can only be the direct intervention of God. With a little reflection we can therefore see that the basic laws of physics are testimony to the universal activity of God.

Leibniz's Solution

Descartes's approach to the establishment of spirit-based scientific philosophy suggests the new course adopted by Leibniz to overcome the dualism of matter and spirit. If we must begin with consciousness, should

this not also be our key to understanding matter itself? In Leibniz's universalization of the spirit-based perspective, matter is not a substance that is opposite to or the contradictory of consciousness, but must be the condition of its very possibility. Leibniz's question essentially becomes: what must matter be like if free, self-determining consciousness is to arise out of it and operate within it?

Leibniz independently co-founded the mathematical theory of calculus along with Newton. Calculus operates with the concept of the infinitesimal. This concept suggests that instead of seeing matter and spirit as separate and independent substances, we should think of them as more like poles of a continuum. The definite material quantity vanishes by division into the immaterial zero and by a reverse process the immaterial expands into the material. Instead of two radically different substances, then, let us suppose that there are only different degrees of the one substance. If we must begin with thought or consciousness or spirit, then let that one substance be spirit. Understood most generally, spirit is internally directed force or intelligent energy. What we call matter is just a more or less condensed form of what we call spirit. More specifically, what we call matter is the barricade or protective armour that the inner spirit puts up to encase itself and ensure its independence from outside forces. What is called "matter" is therefore the *passive force* of resistance that self-directing spirit or *active force* exercises. From this standpoint, the so-called law of inertia, and the foundation of Hobbes's materialism, itself turns out to be an illusion. The plausibility of the idea that material objects are incapable of their own internal activity is due to the inability of our ordinary senses to penetrate the seemingly hard shell of passive or dead force that encases the inner living energy of the being. The microscope, extending and perfecting our senses, allows us to look into a drop of water and discover beneath its apparently placid surface a world teaming with life. Beneath the surface of any object is a complexity of beings brimming with self-propelling energy or activity.

Such fundamentally active material bodies are therefore not purely passive entities that move only by impact with external bodies. They are essentially moved from within, from out of their own inner energies. They are guided, as is quintessentially the case with the human being, by the inner spirit that governs the complex unity of the being. From this "metaphysical" standpoint, the ideas of the new physics undergo a fundamental reinterpretation. When a seemingly resting body is struck by another body in motion, what actually happens is not that one body, the agent or cause, moves the other, the passive effect. The supposedly passive effect is itself a cause in its own right. It is just as much a cause in its own

right as the other body. As Newton states in his third law, for every action there is an equal and opposite reaction. When I press my finger on a stone, Newton writes, simultaneously the stone presses back on me. Which body is the cause, then, and which is the effect? Causal explanation requires a priority of cause over effect. Simultaneous mutual causation, however, provides a more comprehensive framework, in terms of which the mechanistic causal explanations of the materialists are seen to be partial and one-sided perspectives. External and linear causality is a surface phenomenon, or appearance, that is relative to the explanatory framework adopted by the observer. The frame of reference established by the observer distinguishes, for practical purposes, the active cause from the passive effect. In reality, however, both objects are in simultaneous movement in relation to one another.

Leibniz reasons from this law of action and reaction that in the reality beneath the relativistic surface of things energy is not transferred from one body to another, but *on the occasion of apparent contact* between bodies the internal energy of each body is expressed in its own respective motion stemming from its own inner power. Just as the occasionalists argue, there is no real interaction or transfer of motion from one body to another. The first body does not transfer its motion to the second body, but in its equal and opposite reaction the second body expresses from within itself its own internal energy and inner direction. It is therefore not an external God who everywhere acts, as the Malebranche argues, but the beings themselves, who are, as Leibniz says, like "little gods".[3]

Agreeing with Descartes on the fundamental freedom of the self-conscious human being, Leibniz rejects Descartes's compromise with materialism. Not only is the movement of the sun around the earth an appearance, but so too is the mechanism described by the law of inertia and the force laws of physics. If we look more carefully at the fundamental laws of physics we recognize that these laws themselves require a deeper, "metaphysical" understanding of the underlying reality that alone can explain the laws themselves. When a moving body hits a standing one, the standing body resists and seems to repel the first body with its own internal force. How then is it intelligible to say that the first body is an outside cause determining the motion of the second one? For the second body moves with equal and simultaneous force. The mechanistic theory of external causal determinism cannot explain how each body simultaneously moves the other body. The real truth must therefore be that each body, upon apparent contact with the other, only moves itself.

Leibniz therefore radically reverses the metaphysics of materialism according to which all motions are externally caused. He concludes from

the law of action and reaction that neither body is really moved by the other. Each body has the capacity to repel the action of the other through the exercise of its own passive force, which we can call its matter, while directing itself from within by its own inner, active force, which we can call spirit. But such matter and spirit are not two independent substances, as Descartes thought. They are two modes of the operation of the monads, or basic unities, whose combination makes up the complex being. Some of the monads of the being take on the role of resisting outside incursion, while others act in a more obviously positive fashion.

Hence Leibniz has his own version of occasionalism. Each body moves itself on the occasion of apparent contact with another body. The contact between bodies is not what causes the movement, but is only the occasion of their self-movement. Each body therefore is like the self-moving spirit that Descartes posits at the foundation of his system of science. There is no contradiction, then, between spirit and matter, since the supposed passivity and external determination of matter is itself only an appearance created by the shell-like surface of beings. The pond looks perfectly still and inert, but when a drop of water is put under a microscope we see that it teams with life. All bodies are essentially self-moving entities with properties approximating in different degrees along a continuum to the self-conscious human being. Apparently "dead" matter is in reality alive with intelligent, energetic, spirit-like forces having their own internal sources of self-motion.

Rather than a hybrid of two opposed substances whose interaction is unintelligible, human beings can therefore be regarded as the outcome of the evolution of the so-called material world. Leibniz rejects materialist evolutionism, which holds that human consciousness is the passive product of external chains of cause and effect. His is a spiritualist evolutionism, according to which the beings of the material world contain within themselves elements or principles of consciousness and desire, however primitive. Beginning from the simplest elements or "monads", evolution consists in a growing complication of beings, with monads grouping together in more complex unities, while each monad remains essentially an independent, self-determining being. Inanimate "material" beings too are composites of free, self-developing, indivisible, intelligent beings at different stages of complex combinations with one another leading finally to the emergence of genuine self-conscious beings capable of scientifically comprehending the entire process.

This "metaphysical" explanation of physical motion is not meant to contradict the mathematical laws of motion discovered by modern physics. Observable movements indeed take place in accord with the strictest laws

of mechanical force and gravitational attraction. But that doesn't mean that inorganic things, not to speak of living and intelligent beings, are in fact machines. If they were machines, rigidly determined to move in certain ways by external physical causes, how could the non-physical human operator of the machine-body, supposing that there is such a being, possibly affect its mechanism and alter its course? Leibniz argues that it is his position, and not that of the materialists, that is truly scientific. The metaphysical understanding of the object as spirit-like in its core, as made up of indivisible energy units, self-directing spirit-like "monads", in fact explains how motion itself is really possible. The mechanistic materialist philosophy cannot explain motion because it sees bodies as passive containers or vehicles of externally received motions or energies. The motion of one body is explained by a supposed transference of motion from another body. But where did this other body get its motion? From a third body, etc. The particular motion itself is therefore never explained. The source of motion is always elsewhere, in a regress of causes going back to creation itself. Instead of supposing that material bodies are moved by outside forces, as is argued in the deterministic metaphysics of the materialists, Leibniz responds that no motion is intelligible unless every body has the inherent power of motion within itself. We must look within the body, rather than outside it, to find the source of its motion. The human individual directly experiences what it means to move something every time he moves his body. He gives the command and the body obeys, not because he forces an external object to change its inertial direction, but because the body, in all its elements, moves itself in accord with the direction of the commanding spirit.

The Organic Harmony of Life

For Leibniz, then, self-motion or freedom is everywhere—not only in the human mind. If we must begin with the freedom of spirit as the necessary foundation of science, we should not limit this freedom to the human subject, but rather expand the notion of spirit so that it encompasses all bodies. If the self-conscious spirit or mind of the individual is to govern the body, the body itself can be no mere machine. It too is spirit-like. In governing the body, the human spirit is not like a ghost in a machine, but rather like the orchestra conductor who directs the activities of many individual players, each of whom nevertheless acts freely as a result of an internal understanding of his or her musical part. In order to move the trombone player, the conductor of the orchestra does not have to understand how to play the trombone. That is the job of the

trombone player himself. To move the body, we only need know how to give commands. It is the intelligence of the body itself which explains how these commands are executed.

The body is composed of a number of organs and relatively distinct systems of organization. Each of the organs of the body has its own unity, with its own governing spirit or monad. The organs of the body in turn are composed of smaller unities. The unifying factor at every level is the "dominant monad" that gives direction to a complex reality composed of independent, self-determining monads at different stages in their own internal evolution. A human being is a totality made up of different levels of unity: the body consists of organs, and the organs themselves are made up of smaller parts, the cells. Leibniz's conception only improves with further scientific penetration into the substructure of beings. The cell is composed of molecules, and these of atoms, and so on to even smaller and more elusive entities. There are, therefore, unities nested within unities, and each level of complex unity is governed by its respective dominant monad. At the top of the hierarchy of nested unities for the human being is the human soul or self-consciousness—Descartes's "I think."

The human totality is governed by the central consciousness of the person, either through the explicit direction of the mind or through less explicitly conscious (unconscious) directives. But such direction by the dominant monad is not a *cause* that externally moves another object. There is no real interaction between beings, no causal determination of one being's movement by another's. Everything moves itself with awareness of every other being, however obscure such awareness must for the most part be. Each part of the totality has its own consciousness, its own monadic unity, and so its own inner intelligence and resulting drives, desires, and purposes. The body is not a mechanical machine but a community of harmoniously cooperating units or individualities, each with its own potentialities to realize. In the well-functioning body, there is no contradiction between the self-realization of any part and over-all cooperation or harmony among the parts. The interests or advantages of the heart do not compete with that of the brain, or the hands. Nor does the one impose its will or power on another. Each is fulfilling itself by its own inner energies without being forced to move by some other part, not even by the mind of the person. The body is not a mechanical device in which passive parts are moved by outside force, but a marvellous harmony of self-determining unities, each having its own centre of intelligent self-motion.

According to this view, I do not *cause* my hand to move by initiating a mechanical chain of causes and effects extending from my brain to my

hand. Malebranche was essentially right about our experience. We do not know how we move processes in the brain—and so we don't. But this does not mean that God must cause the brain, or hand, to move. I want my hand to move as a result of some choice *I* have made, and, simultaneously, my hand, out of *its own* inner awareness of its own purposes, moves itself. This idea is not so peculiar as it might first seem. Each part of the body is aware of every other part. My hand is therefore aware of my desire for it to move. It fulfils its inner nature, which consists in being a hand, in responding to this desire on my part. There is no force applied from the outside, only an impulse on the part of each being to fulfil its own nature within the hierarchy of nested organizations that constitute the complexity of the human being. Just as the human worker in a large corporation takes orders from management for his own reasons, while being always free to quit, so, on their own more obscure level of desires and purposes, does every cell of my body freely join with me in our own corporate enterprise.

This idea of harmonious relationship becomes more remarkable, or perhaps the word is problematic, as we extend this perspective from the framework of an organism such as the human body, to the relationships that exist *between* bodies. If there is harmony within the complex unity of the human body, there must also be harmony in the universal relationship of bodies that we call the Earth, or the Universe. Otherwise, how would the laws of physics be possible? The laws of physics predict precise behaviours from bodies in their respective motions. There is a law of attraction that predicts that bodies will move in relation to each other at a definite rate—in direct proportion to their mass and in inverse proportion to the square of the distances separating them. The mechanistic approach explains this coordinated behaviour by outside forces, with all the difficulties that this creates for human freedom, for scientific knowledge, and even for the very understanding of motion itself. Once this position is rejected, we must suppose that the law, order, or harmony that we observe results from internal impulses, in the same way that the movement of the heart cooperates with the movement of the stomach. Each being therefore realizes itself in a complex harmony with every other being in the entire universe. Nothing forcefully moves anything else. Everything freely moves itself out of its own inner purposes in the context of every other being.

Such a perspective is more obviously applicable to relationships between adult human beings. In human relationships, each person realizes his or her goals in relation to other humans who are doing likewise—and no one is forcing the other into the relationship. Even the slave must consent to enslavement, for he has the inner capacity to resist if he really

wants to do that. This is the model on which Leibniz seeks to explain even the simplest forms of physical movement, for only in this way are distinctive *human* relationships really possible. If physical motions were governed by mechanistic laws, how could human relationships, which arise out of the natural world and interact with it, be any different? But if we recognize the creative self-determination of the human spirit, as the underlying and necessary basis of modern science itself, then to explain how such self-direction could arise out of the natural world, as well as operate within it, it is necessary to suppose a continuum from the human spirit to the simplest elements of nature.

Pre-Established Harmony

If nothing moves anything else, if every being is self-moving, how is it even possible that the simultaneous movements of many self-determining and autonomous beings are in mathematically exact harmony with one another? We can intuitively understand why the movement of the heart harmonizes with that of the stomach. These are two organs each of whose natures functionally implies the other. But when one billiard ball strikes another, why does it simultaneously happen that the struck ball moves in a certain direction according to mathematically precise laws of motion? This question poses no immediate problem for the materialist, who explains the motion of the struck ball by impact from the moving one. But then, to be consistent, he must expand this perspective up to the denial of any kind of self-determination, including that of the human subject. The reversal of this perspective that Leibniz establishes requires instead that we deny outside causality even in such an intuitively clear example as that of the billiard balls. We are obliged to ask how it is possible that when one ball is struck by another, each ball simultaneously *moves itself* in ways that physics predicts. Unlike the example of the heart and the stomach, there is nothing about either ball that implies the other, and yet they move harmoniously and predictably in relation to each other according to a precise law. If we reject materialist determinism, where everything is passive and nothing moves itself, it seems that we have to answer such seemingly strange questions. For it seems that we cannot say that I “cause” my hand to move in a certain way, or that the first billiard ball “causes” the second to move in a certain direction, without reintroducing the deterministic perspective, and so making human freedom impossible and motion itself unintelligible.

Malebranche explains the coordination of beings according to scientific law by the action of God. Leibniz rejects such divine interventionism as

unworthy of God's power. Such a seemingly all-powerful puppet-master Creator is in reality powerless to create beings genuinely able to move themselves. While Malebranche's theory gives to God a universal and indispensable presence, it essentially belittles divine creation. Occasionalism supposes that God is unable to create real beings with their own motion, but only a puppet show of dead objects that move through divine manipulation. To explain the harmony of a world of self-moving beings which do not causally act upon one another, Leibniz argues instead for pre-established harmony. The Creator is indeed ultimately responsible for the harmony that is observed between the objects of experience, but not by intervening continuously in the fashion of a puppet master. Divine Spirit, the ultimate source or unity or dominant monad of the complex multiplicity of the universe, creates rather in the manner of a master gardener. God not only brings into existence the multitudinous seeds of individual life, but also selects, out of an infinity of possibilities, which seeds to plant and where to place them in the beginning.

Out of all the possibilities of creation an infinite variety of possible beings can be combined in an infinite number of ways. There are limitations, however. There are some impossibilities, for not even God can create a square circle. Not every type of possible being, moreover, is compatible with every other, for the existence of some possible beings would contradict that of others. For example, beings that move in relation to one another in direct proportion to their masses and in inverse proportion to the *cube* of the distance between them have had to be excluded from our universe. Observable harmony therefore presupposes the intelligent selection of possible beings that can coexist with one another. But not every possible combination of compatible beings is of equal value or equally worthy of divine creation. The ideal universe, Leibniz holds, would be the one in which there could be found the greatest amount of diversity compatible with the greatest amount of order, lawfulness, or harmony. But the greatest possible order does not mean perfect order, with no clashes or disharmonies. Even in the best possible world, Leibniz argues, there will be clashes and disharmonies of various kinds depending on which seed is planted where, and the inner natures of the seeds themselves. Such clashes or disharmonies can however be productive of future harmonies which would not be possible otherwise. Good can come out of evil. We can be assured in a general way that an all-wise and all-compassionate Creator would not create in such a way that the universe in which we find ourselves is inferior to another possible one. We therefore can be reasonably assured that we find ourselves in the best of all possible worlds. If there are, nevertheless, disharmonies, or evils that

seem intolerable, there must have been no better way for the Creator. Creation itself implies imperfection, while it is ever moving toward replicating the perfection of its Source.

Divine creation therefore consists in bringing into existence a selection of primitive beings or monads, each of whose development harmonizes in the best possible way with that of every other being. The seeds then mature out of their own inner growth, realizing their own innate purposes. And the result is a beautiful garden of marvellously coordinated patterns. Each being strives to realize its own potential through evolutionary transformations, starting from the simplest state. Some seeds of life evolve into worms and others, at the same time, into birds. How fortunate for the birds that there are worms. Thank God for the worms, the robin must be singing each morning, while the worms silently surface to fulfil their earthly service and gratefully meet their chosen destinies, thanking God for the birds. For it is in this way that the monads of the lowly worms themselves become capable of flight.

In this spirit of coordinated harmony, each being achieves its own evolving purposes through the inner unfolding of its nature while finding in its outer environment the "occasion" for realizing those purposes. Such occasionalism is not due to the moment-to-moment intervention of God, but arises out of the divine plan or programme that has been rooted in the beings of the world at the beginning of time. Each being develops itself out of its own energies, and yet, thanks to the harmonies of the original arrangement, its inner unfolding corresponds with the simultaneous unfolding of the other beings. Leibniz called this initial establishment of the evolutionary capabilities and compatibilities of the original elements of the universe "Pre-established Harmony". Leibniz's evolutionism is therefore intermediary between the external causality of later natural selection and the equally external causality of an interventionist divine Intelligence. The direct cause of evolution is rather to be found in the purposeful activity of the evolving beings themselves.

Kant Takes His Stand against the Master

From his earliest writings, Kant is engaged in a debate with his declared philosophical master, Leibniz. In his first work, *Thoughts on the True Estimation of Living Forces* (1747), written when he was twenty-two years old, Kant wrote that[4]

> … I am of the opinion that it is sometimes useful to place a certain noble trust in one's own forces. Such confidence vivifies all our exertions and imparts to them a certain impetus that is very favourable to the search for

> truth. If one is in condition to persuade oneself that one dares somewhat still to trust one's own view, and that it might even be possible to catch a Master Leibniz in error, then one makes every effort to verify one's supposition. Even after one has gone astray a thousand times, the gain thereby accruing to the knowledge of truth will still be much more considerable than if one had only kept to the beaten path.

Kant concludes his declaration of philosophical independence by echoing Martin Luther's challenge to the reigning Church: "Here I take my stand."[5] And just as Luther challenges the Church that speaks in the name of Jesus while defending the authentic teachings of the spiritual Master himself, Kant takes issue primarily with the Leibnizians rather than with the deeper thought of Leibniz himself. Kant maintains and deepens this same orientation throughout his life. After completing his three major Critiques, an elderly Kant writes in 1790 that "*The Critique of Pure Reason* can thus be seen as the genuine apology for Leibniz, even against his partisans whose eulogies scarcely do him any honour".[6] Thus, at the end of his prodigious career Kant sees his major work as a justification of the deeper thought of Leibniz against his epigones. This homage to Leibniz near the end of his life is testimony to a lifetime of testing his own suppositions with those of the Master, attempting to verify them, while going astray a thousand times until he achieves that higher vantage point that allows him to pay full tribute to the philosophical fountain of his youth.

The early Kant is dissatisfied with Leibniz on a number of grounds. In notes for an essay defending the English poet-philosopher Alexander Pope against Leibniz, written around 1754, Kant argues that this is not *merely* the best of all possible worlds. Such a formulation of the nature of the world is compatible with a great amount of imperfection or evil. On witnessing the horrors of inquisitorial violence, Voltaire's Candide reflects in the spirit of the Leibnizian philosophy: "If this is the best of all possible worlds, I wonder what the others are like!"[7]

The central imperfection of the creation is due, Leibniz holds, to the capacity of human nature to choose freely, and hence to embrace the evil of egoism. God could have created beings who naturally love one another without conflict, but decided that a world of free beings, capable of choosing evil, was a better world than one in which individuals instinctively love one another without the possibility of free choice. Thus the best possible world involves a great deal of evil, but one in which people naturally love one another would, paradoxically, involve an even greater evil—the evil of universal slavery to nature or instinct, however benign this slavery would be.

In his early notes comparing Leibniz with Pope, Kant agrees with Pope that ours is not merely the best world possible, but an absolutely perfect world. Just as all physical motion is as it should be, so are all the inclinations of humanity as they should be. It is in this spirit that Kant appreciates Pope's analogy between the moral or human world and the natural world, where the "chain of love," the binding law of gravity or attraction, leads all physical objects in its embrace to work for the general good. Pope writes with the inimitable condensation of his rhymed couplets:

> Look round our world; behold the chain of love
> Combining all below and all above.
> See plastic Nature working to this end,
> The single atoms each to other tend,
> Formed and impelled its neighbour to embrace.
> See matter next, with various life endued,
> Press to one centre still, the general good.[8]

This chain of love binding the atoms together is comparable to the universality of human reason which naturally constrains self-centred egoism. Thus two tendencies complement one another, a force of attraction that pulls the elements to a single centre and an opposing force according to which each element and individual strives to preserve its own existence and to fulfil itself. As a result of the combination of these forces, the advantage of each individual being's development or evolution—however apparently selfish—is simultaneously to the advantage of every other being. Pope writes:

> Two principles in human nature reign;
> Self-love, to urge, and reason, to restrain;
> Nor this a good, nor that a bad we call,
> Each works its end, to move or govern all:
> And to their proper operation still,
> Ascribe all good; to their improper, ill.
> Self-love, the spring of motion, acts the soul;
> Reason's comparing balance rules the whole.
> Man, but for that, no action could attend,
> And but for this, were active to no end:
> Fixed like a plant on his peculiar spot,
> To draw nutrition, propagate, and rot;
> Or, meteor-like, flame lawless thro' the void,
> Destroying others, by himself destroyed.[9]

Pope's argument was later elaborated in the socio-economic science of Adam Smith who argues that a world created by rationally self-interested beings, interacting with one another through the mechanism of market exchange, produces the greatest possible happiness for all. This of course is far from being a perfect world, but all other possible worlds—consider, Smith says, the tribal kingdoms of Africa—are worse. Thus the mutual attraction that operates in economic life is in harmony with self-interest on the part of individuals, and vice versa. In defending Pope's optimism, Kant therefore criticizes the Master, Leibniz, for being *insufficiently* optimistic. This is not merely the best of all possible worlds—it is even better than that! Thus in this early criticism of Leibniz, Kant tries to be more Leibnizian than Leibniz himself. Thus, Kant argues:

> Self-love, which has as its only purpose one's own pleasure, and which seems to be the manifest cause of the moral disorder which we observe, is the origin of that beautiful harmony which we admire. Everything which is of use to itself also finds itself constrained to be of use to other things, as well. The universal bond, which links the whole together in a fashion which has not been examined, ensures that individual advantages always relate to the advantage of other things, and do so in a perfectly natural sequence. Thus, a universal law of nature firmly establishes the love which maintains the whole, and it does so by means of the motive causes which also naturally produce that evil, the sources of which we would happily see destroyed.[10]

Pope rhapsodizes over "the chain of love" that draws even the atoms towards one another, giving thereby poetic expression to the law of gravity. Leibniz argues prosaically, however, that the existence of gravitational law does not indicate a real connection between beings. The indivisible, atom-like monads, as well as the more complex beings of the material, organic, and human world, do not tend towards each other as a result of a real influence that each has on the other. Each being is radically independent of the other. This does not mean that the law of gravity, understood properly as a description of surface appearances, is false or inaccurate. Despite their independence of one another, the behaviours of beings with respect to one another do in fact *correspond* to the law of gravity, and the other laws of physics. But correlation is not causation. The correlation is an external harmony whose source is in pre-established harmony rather than in actual interaction. The law of gravity is thus a matter of appearance for the scientific observer. The deeper reality, revealed by metaphysical comprehension of the nature of things, is one of beings that determine their own movements independently of one another, without being pulled or pushed from the outside. They therefore only