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Kant's Epistemological Geography: The Role of *Schwärmerei* and Demarcation in the Conception of Critical Philosophy

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Contents

Abstract

This study intends to examine one Kantian problematic that has been often overlooked, especially in recent years. It explores Kant's reactions to so-called occult phenomena and related teachings. Kant's initial and the single most important interlocutor in this respect was Emanuel Swedenborg. Kant refers to his visions and the tone of his writings as *Schwärmerei*, that is an exaltation or an exalted tone. The problem of explaining the conditions of possibility or impossibility of the knowledge-claims of this type, is apparent in Kant's writings from the late 1760s. The object of the exalted knowledge-claims, it is argued, continued to figure in the critical period as one of the prime examples of the unkowable objects, that is, *noumena*. Therefore, it is claimed that *Schwärmerei* and the related practices played an intrinsic role in Kant's conception of the *Grenze*, a limit of the conditions of possibility of human knowledge. For example, the demarcation between the *phenomena* and *noumena* relies on an assumption of the particular nature of the knowledge-claims, modelled upon the claims of *Schwärmerei*, pertaining to objects which are beyond our grasp. In addition, Kant's concept of *Grenze* and the outcome of his demarcation has been put into an historical perspective. Thus, his demarcation criteria are contrasted to modern pre-Kantian attitudes towards the occult practices and the attempts to devise demarcation criteria in science. In this respect special attention has been given to Newton's methodology and research. The study also contains an examination of more recent criteria of demarcation proposed in philosophy of science which draw from Kantian conception of demarcation. Of particualar interest are Popper's and Kuhn's demarcation criteria between the scientific and non-scientific as well as some recent demarcation policies that is argued, can be related to them. The primary sources of this study can be found in an interdisciplinary field: Kantian scholarship, history of science and the occult in the period of Renaissance and early Enlightenment, contemporary philosophy of science, and the recent debates concerning modernity.

List of Kant's Works

Unless specified otherwise, the following English editions have been used for the purpose of referencing and citations. Abbreviations on the left have been used throughout.

Anthropology [1797]	*Anthropology from a pragmatic point of view*, trans. M. J. Gregor. The Hague: Martinus Nijhoff, 1974.
Correspondence [1759-99]	*Kant: Philosophical Correspondence*, trans. Arnulf Zweig. Chicago: University of Chicago Press, 1967.
Dissertation [1770]	*Dissertation on the Forms and Principles of the Sensible and Intelligible Worlds*, in *Kant: Selected Pre-Critical Writings*, ed. by P. A. Schilpp. Evanston: Northwestern University Press, 1960.
Dreams [1766]	*Dreams of a Spiritseer* and Other Related Writings, trans. J. Manolesco. New York: Vantage Press, 1969.
First Critique [1781/1787]	*Critique of Pure Reason*, ed. N. Kemp-Smith. London: Macmillan, 1978.
Foundations [1786]	*Metaphysical Foundations of Natural Science*, trans. J. Ellington. Indianapolis: Bobbs-Merrill, 1970.

Geography [1802]	"A Translation of the Introduction to Kant's "Physische Geographie"" in J. A. May, *Kant's Concept of Geography*. Toronto: University of Toronto Press, 1970.
Natural History [1755]	*Universal Natural History and Theory of the Heavens*, trans. W. Hastie. Ann Arbor: University of Michigan Press, 1969.
Observations [1764]	*Observations on the Feeling of the Beautiful and the Sublime*, trans. J. T. Goldthwait. Berkeley: University of California Press, 1960.
Orientation [1786]	"Orientation in Thinking" in *Critique of Practical Reason* and Other Writings in Moral Philosophy, trans. and ed. by B. W. Lewis, Chicago: The University of Chicago Press, 1949 (reprinted by New York: Gerald Publishing Inc., 1976.).
Religion [1793]	*Religion within the Limits of Reason Alone*, Second Edition, trans. T. M. Greene and H. H. Hudson, New York: Harper & Row, 1960.
Second Critique [1788]	*Critique of Practical Reason* and Other Writings in Moral Philosophy, trans. and ed. by B. W. Lewis, Chicago: The University of Chicago Press, 1949 (reprinted by New York: Gerald Publishing Inc., 1976.)
Superior Tone [1796]	"On a Newly Arisen Superior Tone in Philosophy" in *Raising the Tone of Philosophy*, trans. and ed. P. Fenves. Baltimore: John Hopkins University Press, 1992.

Third Critique [1790] *Critique of Judgement*, trans. J. C. Meredith. Oxford: Clarendon Press, 1952.

List of Illustrations

Introduction

Someone raised and educated in a Western cultural setting, may be quite apt to understand the various claims that purport to generate knowledge, as belonging to two more or less distinct groups. The first type of claims are to be found in, or connected to, the practices which require some means of justifying them. In other words, there is a set of requirements to be met in order for the statement to be generally accepted. Those requirements are often assumed rather than explicitly defined. However, in Foucauldian terms, *connaissance*, a particular body of knowledge, is dependent on *savoir*, various discursive conditions needed for an object of knowledge to be given or statements to be formulated. The knowledge-claims of the first group may be generally encompassed under the banner of the "scientific." Obviously the field of such enunciations is diverse and increasingly fragmented. Nevertheless the task of metascientists with the help of historians is to determine the common character and scope of this terrain as much as to account for the diversities within it. The other type of knowledge-claims that are seen as distinct from the first, are much more difficult to pin-point. This type tends to be seen as of a non-empirical, religious or artistic character (if one ignores the distinction between *scientia* and *artes*). This group of claims is much less defined and may not share any common characteristic. In other words, it constitutes a grouping in as much as it does not belong to the scientific field.

As such it can be seen as an alternative fashion of framing the knowledge-claims. Thus in the second group we may find statements that have an altogether different discursive context, such as Christian revelation or Taoist *I Ching*. They can be expressions of religious faith but may include the alleged paranormal capacities of individuals, such as extra-sensory perception, magical powers activated by uttering words or experiences of being carried to an unknown place by aliens. Their letter is not necessarily connected to the religious. Assertions concerning the influences of astral bodies on individuals and the "cause" of Newton's gravity, for example, or a U.F.O. need not have any religious implications. It is rather that if they have been categorized as non-scientific it is because they were perceived as non-empirical, in a broader sense. Practices that might be, perhaps unproblematically, related to the second type of knowledge-claims would range from theology, occult practices like alchemy and astrology, and spiritualism, to ufology, voodoo and guru-related practices. Their modes of acquisition of knowledge are altogether different to the ones implied in scientific disciplines. Thus the bilateral way of questioning and putting the claims forward, that is scientific and alternative, presupposes their incompatibility and incommensurability.

If one is allowed to make a distinction along those lines, it will be interesting to pose an historical question enquiring about the context of its inception. As recent studies of the early modern period have shown, in the period of the emergence of modern science we find no clear criteria which would enable any straight-forward distinction. Out of the practices stated above, the occult, in a broader sense, seems to figure most

prominently in the scientific discourse of the period. Even though, the occult corpus was more often than not considered as separate from the scientific, there is a number of conjunctions in which occult teachings have been assimilated into the body of scientific knowledge. Moreover a number of scientists actively practised in one or another aspect of *scientia occulta*, e.g. theoretical astrology or experimental alchemy. Biblical studies too, played at times a complementary role in the scientific investigation. Therefore, the Renaissance period and early Enlightenment seem like an obvious point of departure in inquiring about the subsequent changes of perspectives in epistemology.

Considering this historical context, I will propose here that Kant's philosophy introduces a significant change in attitude towards both the occult and the scientific. What constitutes Kant's novel approach, broadly speaking, is an attempt to demarcate between the legitimate and illegitimate knowledge-claims in order to reinforce the certainty of knowledge overall. Kant uses the term *Demarkation* only in his initial precritical attempts to make a distinction, and in passing. Thus in his critical writings he prefers the use of the concept of *Grenze*, a limit to the legitimate knowledge-claims. The reason for this is that he aims at designating the limitations of human faculties of knowledge, rather than demarcating between the actual practices. Nevertheless, I will try to indicate not only that scientific and occult practices fit into the scope of *phenomena* and *noumena* respectively, but also that the latter concepts have been construed on the basis of models of particular scientific and occult practices. Furthermore, since Kant's metaphors intended to illustrate the nature of the

distinction between *phenomena* and *noumena* infallibly involve spacial relations, it seems appropriate to interpret his procedures as aiming at criteria of demarcation. I have borrowed the concept of demarcation from the terminology of contemporary philosophy of science. The "criterion of demarcation" has become known through Karl Popper's use where it was meant to distinguish between science and "metaphysical ideas." I will take the term demarcation in a broader sense, to designate any criterion or a set of criteria intended to distinguish between the types of knowledge-claims, kinds of objects of possible knowledge or the actual practices. The procedures can establish demarcation criteria irrespective of whether they are purely logical or proposals for a consensus based on value-judgments.

Kant's understanding of the occult is predominantly conceived on the basis of the works of the Swedish spiritseer Emanuel Swedenborg. Although there are indications that he was familiar with some other occult teachings such as Neo-Platonism or Kabbalah, his three-year-long study of Swedenborg's voluminous work, *Arcana Coelestia* left by far the most significant mark. Kant was first intrigued by the stories that made the Swedish seer well-known concerning his alleged supernormal powers, sight at distance, locating missing objects or gathering information, via spiritual media. This led him to investigate Swedenborg's writings which deal with detailed explorations of the spiritual world, its relations to our natural world and an unravelling of the "hidden" meaning of the Bible. It is in connection with Swedenborg's pretensions to knowledge that Kant will frequently signal the unknowable by the term *Schwärmerei*. This term can be most appropriately translated as "exaltation," thus

primarily denoting the state of spiritual delight. At the same time, *Schwärmerei* may refer to something ennobled, dignified, high in rank or rising high. Thus in the case of Swedenborg, who not only was an aristocrat, but alleged being, at times, on a par with high spirits, *Schwärmerei* may stand for an "elation." That is, being high in spirit or amongst the high in spirit. Perhaps less adequately, *Schwärmerei* has also been rendered as "enthusiasm." In this way it would point at one's high expectations or to one's attitude towards knowledge that can be connected to the Humean notion of "religious enthusiasm." For Kant, any practice that involves *Schwärmerei* is professing to possess an intellectual intuition. If humans were to be capable of such a mode of knowledge, he says, it would be far more noble than the faculty of understanding. As Swedenborg deals with the range of objects that are spiritual, intellectual intuition in Kant would mean an access to the world of spirits. However as humans have no such capacity, Swedenborg's revelations about the spiritual state of affairs and *Schwärmerei* in general, are to be characterized only by an exalted tone, a *simulacrum* of Swedenborg's real aims and a form of mental illness. Exalted knowledge-claims not only fail to satisfy the constitutive and regulative criteria of the human faculty of reason, but offer the prime example of the practices ignoring this legislation. Moreover since such pretensions tend to gather a social following, they are a matter of social concern that deserves a proper social critique.

My intention is to specifically investigate the scope of the *Schwärmerei* problematic that, I will argue, is essential to Kant's conception of demarcation-lines, rather than go into the various aspects of the concept of *Grenze*. Thus in addition to an attempt

to show the significance of Kant's novel approach to the instances of the occult in contrast to pre-Kantian conceptions, my thesis is that Kant's criteria of demarcation is inextricably bound to the claims of *Schwärmerei.* That is, the concept of limitations of human knowledge that distinguishes between legitimate and illegitimate knowledge-claims and their objects *phenomena* and *noumena*, is construed on the basis of Kant's considerations of *Schwärmerei.* Initially we find an attempt at determining the conditions of such limitations in his precritical publication entitled *Dreams of a Spiritseer*. The plan sketched in *Dreams* will be carried on with an increasing sophistication to the *First Critique*. Thus the limiting concept of *noumena* bears an unambiguous mark of the "Swedenborgian object." In other words, all that we can know about the *noumena*, despite their unknowability, is of a Swedenborgian character. Therefore I will argue that the demarcation-lines that secure the proper field of science, have been devised on the basis of what is unknowable, that is the objects of *Schwärmerei.*

In this study I will therefore proceed along the following line. In the first chapter I will examine the modern conjunctions between the occult and the scientific prior to Kant, look for tensions and conformities mostly on the basis of some recent and telling studies. I will pay a special attention to Newton as one of the major figures in this period and one who influenced Kant profoundly. Further, I will offer a brief account of Swedenborg's doctrine, and investigate in some detail Kant's encounter with Swedenborg and indicate the problem that *Schwärmerei* posed for him. The third chapter will then deal with Kant's conception of demarcation. I will start by analysing

his metaphors in *Dreams* and in the *First Critique*, meant to illustrate the terrain of demarcation, which I will call the "geography of épistemè." The examination of the demarcation criteria in the respective books will follow, as well as of Kant's social strategies against the *Schwärmerei*-related practices. I believe the study contains an exploration of a less familiar Kantian terrain in terms of contemporary Kantian scholarship which often concentrates on the technical finesse of some well-known problems. I will read Kant **with** Kant, rather than **against** him. That is, I will not attempt at a critical assessment of Kant's demarcation criteria in an ordinary sense. The outcome of Kant's demarcation efforts, i.e. the duality of phenomenal and noumenal, have been a focal point of various sorts of criticism and, so to speak, caught in a crossfire in the post-Kantian debates. For different reasons and on the basis of different considerations, much of the post-Kantian Continental philosophy from Schelling and Hegel to Husserl and Heidegger abandons Kant's project of fortifying the *Grenze*. Even though, it builds up on Kantian conceptual heritage (with the exception of Heidegger), it takes a departure at a point beyond the limit of Kantian épistemè. On the other hand, Anglo-American commentators of Kant who are sympathetic towards Kant's thought, are often willing to endorse some sort of Kantian philosophy only at the cost of disposing of the noumenal altogether. I will not offer a survey of such argumentative challenges to Kant's conception or try to construct a set of arguments which would illustrate its inherent inadequacy. My intention is rather to follow Kant's text, analyze the initial problem which urged Kant's distinction between *phenomena* and *noumena* and illustrate the context of its applicability as much as the significance of his demarcation-criteria for epistemology and social institutions and practices. In this process we will witness how Kant at the same time

tries to dispense with and accommodate the Other of knowledge. As a result some number of lapses, such as the insufficient support for Kant's demarcation claims about the heterogeneous material taken into consideration or internal tensions due to incapacity to logically assimilate elements that are self-imposed by the system, will become apparent. My critical remarks will be largely limited to the final section. In short, I will aspire to let Kant "speak for himself" and as his position on demarcation and *Schwärmerei* unfolds, let it, for a lack of a better word, "deconstruct" itself.

In the final chapter, however, I will take a different approach. There, I will treat the criteria of demarcation as conceived by contemporary philosophers of science, Popper and Kuhn, who explicitly draw from Kant. As opposed to Kant, who is not always prone to argumentation, philosophy of science debates rely on an argumentative exchange. Therefore it seemed appropriate to approach them in an argumentative manner. In other words, I will treat the texts in accordance with their own discursive conditions. I will consider my task accomplished, if this study manages to shed some light on the distinctions offered by the opening suggestions and the criteria of demarcation that seem to be central to it. Or more specifically, if it sufficiently establishes the role of the Other of knowledge, in Kant's terms *Schwärmerei*, in the conception of his demarcation criteria.

Chapter 1

Conjunctions of Occult and Scientific in Modern Pre-Kantian Thought

1 The Occult in an Age of Scientific Revolution

"Cambridge's greatest son" was "not the first of the age of reason," but "the last of the magicians," and "the last wonder-child to whom Magi could do sincere and appropriate homage," John Maynard Keynes aptly prompted in his paper on the occasion of the tercentenary of Newton's birth, in 1946, after examining Isaac Newton's alchemical writings.[1] The statement of Lord Keynes was so much more surprising since it came from someone who belonged to the positivist circle of Bertrand Russell and G. E. Moore at the turn of this century. It was this very tradition of Western thought that has understood itself as stemming from the age of reason and as having done more than any other to establish Newton as a founder of modern science. The last study of Lord Keynes (he died a few months before the tercentenary celebration) increased the interest in Newton's unpublished work. Newton's scripts were put aside after being judged as "Not fit to be printed" by Thomas Pellet who examined his papers for the family following his death. Since Lord Keynes' study,

[1]See, Keynes, pp. 27-34.

they have become a topic of a whole range of studies in Newton's theology, alchemical works, his vitalistic ideas, and attitude towards astrology. Although this work is still largely in progress, it often offers profound rereadings that try to do justice to Newton more than three centuries after the publication of his work. Consequently the rift between Newton and Newtonians has become much deeper than first imagined. One thing seems to be certain, it will not be possible any more to present a truly Newtonian world-view solely on the basis of his published works, primarily *Principia* and *Opticks*, isolating his work in mathematics and physics from his theology, alchemy or chemistry, and neglecting his wide ranging interests and researches.

It was a few years later that the term "scientific revolution" was introduced by Herbert Butterfield in his lectures in 1948 and in Rupert Hall's successful book with the same title, published in 1954. The term was designed to cover the period that may be roughly marked by two publications, Copernicus's *De Revolutionibus* and Newton's *Principia*. It offers an account of the period in which the modern world was born. A period of unprecedented expansion of "western" or "European" culture that changed the cultural, social, economic, ecological, etc., shape of the planet.

Paolo Rossi, amongst others, considered those two markers as usefully indicating the period of a break between the old and the new science. If we emphasize the analysis of the history of ideas over the social changes in that period, as he does, those

parameters should help "us to understand some of the essential and decisive factors of what we usually call modern thought".[2] Rossi lists some fourteen factors that are responsible for the change in scientific attitude. I will limit myself to those that I find most significant for our purpose. Rossi lists first "the refutation of the priestly idea of knowledge inherent in hermeticism" exemplified in alchemical literature and Renaissance natural philosophy. It seems that the rejection of restricted priestly knowledge runs parallel to the idea of collaboration and making the result of scientific research publically accessible. Rossi finds these two ideas to be essential characteristics of what he calls "the first scientific society." Therefore, the distinction between the esoteric and exoteric learning was blurred and debates concerning knowledge were positioned within the public arena. In somewhat simplified terms, it accounts for the cessation of the role of hierarchically ordered institutional structures. They could no longer be embodied in the church, seen as the final arbitrator of the interpretation of the scripture; the ultimate referent in the process of inquiry. It is now incumbent on the scientific community and its experts to discuss the procedures of justification which became instrumental in assessing the outcomes of an inquiry. Further, the object of inquiry, namely the world, is now seen less as a preestablished hierarchy designed to suit human standards and more as a machine whose component parts are vital to the overall mechanism. In addition, the major change, Rossi claims, concerns "the theory that man can only know what he does or what he himself constructs."[3] Prior to this alleged insight, Greek and Medieval conceptions were not marked by such restrictions. Greek conception may be illustrated through the

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[2]See, Rossi, p. 250.

[3]Ibid., p. 251.

Aristotelian definition of arts as *tecnai*, at least in one sense understood as a completion of the works of nature or as *mimesis*, an imitation of its products. Human products had only instrumental and not intrinsic value. By contrast, the forerunner of the scientific revolution Francis Bacon, believed that the artificial does not differ from the natural in form or essence, but only in efficiency. From the criterion "of knowledge-as-making or the identity of knowledge and construction (or reconstruction)"[4], the idea is derived that "the only realities of which we are able to have true knowledge" have phenomenal basis.[5] This in turn warranted the realization of limitations on the part of human intellect. Therefore, Rossi concludes that "broadly speaking, in so far as nature is not conceived of as an artifact, it is unknown and unknowable."[6] Scholars that study the mechanisation of the world picture often neglected this aspect that, according to Rossi, showed strong resistance toward the occult tradition and consequently led to its rejection. Although I do not intend to argue against Rossi's thesis in detail, I believe that an examination of proposed tendencies in the case of Newton, developed below, will show sufficiently that it involves a simplification. Even at the end of the period in question, I will argue, one was still able to adhere to the opposite attitude concerning knowledge and make a profound impact on the development of natural sciences.

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[4]Ibid., p. 253.

[5]Ibid., p. 252.

[6]Ibid., p. 253.

If we follow the chronology of postwar studies of the conceptions of knowledge in the period of Renaissance and early Enlightenment, we are able to discern that the "rediscovery" of the role of the occult in the period preceded the attempts to conceive the features of this period that find continuity with contemporary science under the banner of "scientific revolution". The predecessors of both types of study may be found in Lynn Thorndike's *History of Magic and Experimental Science*, published in eight volumes between 1923 and 1958, on the one hand, and E. A. Burtt's *The Metaphysical Foundations of Modern Science* from 1924 on the other. Although one may only admire Thorndike's tremendous pioneering effort that emphasizes the role of the occult or Burtt's comprehensive study which completely neglects it, both attempts stay one-sided in conceiving dominant world-views of the time. It was not until 1964 and the appearance of Francis Yates's *Giordano Bruno and the Hermetic Tradition* that the two approaches to the study of the period came into conflict. Analysing mostly texts from the Hermetic tradition and Renaissance Neoplatonism, Yates stressed that the development of Renaissance science cannot be understood without an account of the role that occult played in it. Furthermore, the "hermetic attitude toward the cosmos", she wrote, was "the chief stimulus of that new turning toward the world and operating on the world which, appearing first as Renaissance magic, was to turn into seventeenth-century science."[7] In *Rosicrucian Enlightenment* she shows how at least some fractions of English and German Rosicrucians saw themselves as a part of the project of *Aufklärung*. The occult became marginalized, according to Yates, and slowly disappeared from the academic scene, due to the

[7]Quoted in Vickers, p. 4.

institutional pressure and "persecution mania" of the students of the occult at English universities in the late sixteenth and early seventeenth century. Yates's work stirred much controversy. Following her study, it seemed impossible to neglect occult traces throughout the period. Equally, considering the reactions to Yates's writings, it seemed problematic to present the whole period as drawing from the occult. Scholars from fields as diverse as art history, linguistics, philosophy as well as history of science, and history of occult entered into a debate that still has not been exhausted.

Paolo Rossi, despite being one of the first scholars to stress the influence of Hermetic tradition on the scientific revolution, reacted against Yatesian tendencies. In his essay "Hermeticism and Rationality", he says, "what started off as a useful corrective to the conception of the history of science as a triumphant progress, is becoming a retrospective form of historiography, interested only in the elements of continuity and the influence of traditional ideas."[8] This nostalgia for a golden age that wants to construct a new magical world-picture based on "obscurities of magic", "pretentious illusions of alchemists" and "deceptions of astrology", threatens the achievements accomplished through the arduous work done in the history of science. Scientific revolution transformed the world in quite a different way from either religion or philosophy and was responsible for the first attempts at a cultural unity of the world. By overemphasizing the negative effects of scientific and technological changes and dissolving the positivistic conception of science into mythology we risk to lose the

[8]Rossi, p. 257.

benefits strenuously achieved, Rossi believes.[9] Therefore, Rossi's argument against Yatesian approaches to the period, apart from some pragmatic force, seems to largely rest on an assumed consensus over the value judgements.

Another response to Yates's studies came from Mary Hesse, who previously published an influential book on the history of physics, *Forces and Fields*, and was to become instrumental in initiating the philosophical discussions about the distinction between natural and social sciences. In an article entitled "An Apology for the Internal History of Science", she stresses the "conscious self-definition of new science in the course of vigorous repudiation of the hermetics and all their works."[10] In turn this enables one to study the scientific revolution quite independently from hermeticism and other esoteric trends. There seem to be at least two problems concerning Hesse's response. First, in the light of studies done after 1970, when her article was published, the subsequent studies have shown that however vigorous the attacks of the major scientific figures of the period had been, a majority of them were involved in the study of the occult. They held ideas that unambiguously belonged to that heritage, without posing a consciously present threat to their overall scientific world-view. Second, the process of defining the scientific enterprise seems to be much more complex than Hesse imagines. As Hesse notices, the "conscious self-definition" was not founded solely on sets of methodological procedures at a particular historical juncture. Science gained its "identity" in explicit comparison or contrast to other

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[9]See Ibid., pp. 256-73.

[10]Hesse (1970), p. 153.

practices seen as non-scientific. Thus, in order to justify the distinction between the "internal" and "external" ideas circulating at the particular period, we need at least, to test our prescriptive decisions which constitute the internal nature of scientific practices on the historical cases, if not try to arrive at the distinction by analysing the dominant characteristics of the research done at that period. There seem to be no better point of departure for such a task than the investigation into continuities and discontinuities of methodological procedures and other aspects that may comprise the core of scientific practices at the point when science and the occult appeared to be either fully co-existent or merged.

More recently, Brian Vickers has argued along the similar lines. Unlike Hesse, he stresses the importance of a study of the occult for historians of science. However, he goes a step further than Rossi, who believes that science, while still drawing from the occult tradition, made a decisive turn in the period of scientific revolution. Vickers finds scientific and occult practices or as he calls them, "mentalities," incompatible from the outset and co-existing in tension during the scientific revolution. Contrary to Yates's claim that hermeticism was a necessary ingredient that helped found the new science, he sees two separate traditions each with "its own thought processes, its own mental categories, which determine its whole approach to life, mind, physical reality."[11] Vickers's analysis concentrates on differences that seemingly cannot be unified into any a single world-view, such as the magical conception of language

[11]Vickers, p. 6.

which makes conceptual and physical items interchangeable and susceptible to manipulations using the same procedures.[12] His suggestion that issues should be settled on a particular basis and on rereading the original texts is certainly worthy of notice. Nevertheless, he does not offer any explanation of how Renaissance scientists were able to operate "in two finally incompatible traditions." Since those traditions have not emerged from a historical vacuum, how did they develop so that they became recognized as incompatible at some point in history? Do they have different patterns of explanation or modes of legitimation from their imaginary outset? If the answer is "no", what makes them distinct and incompatible in the period of the scientific revolution, apart from a not fully defined set of presuppositions that respectively guide the diverse tendencies in both practices? If the answer is "yes", on the other hand, it runs counter to the traditional account brought forth by some of the classical anthropologists such as Tylor or Lévy-Bruhl, who described the rise of modern scientific knowledge as evolving from the magical world-picture. And if so, what are the extraordinary historical and social conditions, and epistemological predispositions that enabled such a close encounter of two thoroughly different enterprises in the Renaissance.

The purpose of this brief account of recent discussions among historians is to recall the extent to which occult and scientific ideas were conjoined in this period and how difficult it is to determine the nature of that conjunction. My particular interest is to

[12]See Ibid., especially, pp. 6-15.

contrast those conjunctions of the modern pre-Kantian period to the way in which the occult practices were understood in Kantian philosophy. In other words, I would like to examine whether Kant's contribution to the problem of compatibility of scientific and occult practices, constitutes a significant change of perspective. For this purpose, it will be necessary to specify the scope of the occult practices dominant at the time and the manner in which they have figured in the scientific enquiry. A look at Newton's method of investigation will help us clarify the second point.

2 The Scope of the Terms: Occult and Esoteric

Before we turn to the issue of occult influences in Newton's research, it seems necessary to state briefly what is meant by the occult as a tendency, research orientation, set of beliefs or suppositions, or a "mentality," as well as one of the significant practices in the period of Renaissance and early Enlightenment. Since determining the concept of "the occult" necessarily exceeds the scope of my discussion, I do not intend to do more here than to draw attention to a few relevant studies on this subject.[13]

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[13]A. Fauvre, for example, argues that the study of esotericism which would include the study of the occult, deserves academic recognition as a special field. For a pioneering attempt to determine its field of study, see his *Access to Western Esotericism* (New York: 1994). A comprehensive survey of the history of occultism from antiquity to the seventeenth century is provided by L. Thorndike in *A History of Magic and Experimental Science*, 8 vols.(New York: 1928-56). Another valuable historical study with an account

The occult has often been associated with "secret" knowledge, restricted teachings exclusive to initiates. There is, in fact, a common belief amongst occultists of different ages that the "discipline of the arcane" may degenerate if exposed to popular use or may have an overall detrimental effect if its insights are used without guidance. However, secrecy would not be sufficient to characterize those practices. As Georg Simmel was first to note, secrecy is constitutive of social structure and social interaction, and even the most democratic countries that press for public accessibility of information organize much of their affairs secretly.[14] Therefore, we may begin with a definition of occultism that restricts the domain usually attributed to the occult, as formulated by Antoine Fauvre.

> The term *occultism* is properly used to refer to a large number of practices, ranging from astrology and alchemy to occult medicine and magic, that are based in one way or another on the homo-analogical principle, or doctrine of correspondences. According to this principle, things that are similar exert an influence on one another by virtue of the correspondences that unite all visible things to one another and to invisible realities as well.[15]

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of recent writings on the Renaissance is W. Shumaker's *The Occult Sciences in the Renaissance* (Berkeley: 1972). For a sociological approach to the study of the occult, see E. A. Tiryakian's article "Toward the Sociology of Esoteric Culture" in the book that he edited, *On the Margins of Visible: Sociology, The Esoteric and The Occult* (New York: 1974). M. Eliade's *Occultism, Witchcraft and Cultural Fashions* (Chicago: 1976) examines the influences of the occult on a contemporary culture.

[14]See, Tiryakian, p. 266.

[15]Fauvre (1987), p. 36.

Correspondence, here, should be understood as the universal interdependence of all parts of the universe, seen and unseen, and certainly drawn from the ancient idea of microcosm and macrocosm. "Nature likes to hide," and therefore everything in it should be taken as a sign intended to be read and deciphered. Correspondence may be a vehicle for deciphering different kinds of interconnections, between terrestrial and (super)celestial items such as planets, and metals, parts of the human body and faculties of mind, or between the cosmos, its nature and history, and revealed texts like the Bible or the Kabbalah. Instead of using the principle of non-contradiction and causal explanations that exclude the middle in the linear relation between the cause and its effect, Fauvre tells us, occultism relies on the included middle and synchronicity. In its more theoretical considerations, imagination as a power of the mind, or an organ of the soul, plays a crucial role in establishing a cognitive and visionary relationship with a mesocosm, an intermediary world, a necessary step in the programme of the occultists. It is in a form of visionary and pictorial philosophy that this imagery of imagination serves as primary material. The emphasis is on the vision and certainty derived from symbolic relations rather than on belief and faith.[16]

The term "occultism", however, is of comparatively recent date. It was coined in the second half of the nineteenth century by Eliphas Lévi in France and A. D. Sinnett in England to mark a new interest in supernatural phenomena and techniques of passage from one world to another. By contrast, the adjective "occult" has a much longer

[16]See, Fauvre (1994), pp. 10-13.

history of use and bears a larger number of connotations. For example, extrasensory perceptions, such as telepathy and telekinesis, and *déjà vu* experiences are often classified as occult phenomena. Culturally diverse divinatory practices, like Tarot and *I Ching*, sometimes equally carry the epithet of the occult. Furthermore, "occult" and "esoteric" as well as "occultism" and "esotericism" are often used to refer to the same sort of techniques and practices or they are even taken as interchangeable. Edward A. Tiryakian proposes the following distinction that may minimize this confusion:

> By "occult", I understand intentional practices, techniques, or procedures which (a) draw upon hidden or concealed forces in nature or the cosmos that cannot be measured or recognized by the instruments of modern science, and (b) which have as their desired or intended consequences empirical results such as either obtaining knowledge of empirical course of events or altering them from what they would have been without this intervention. . . By "esoteric" I refer to those religiophilosophic belief systems which underlie occult beliefs and practices; that is, it refers to more comprehensive cognitive mappings of nature and the cosmos, the epistemological and ontological reflections of ultimate reality, which mappings constitute a stock of knowledge that provides the grounds for occult procedures. By way of analogy, esoteric knowledge is to occult practices as the corpus of theoretical physics is to engineering applications.[17]

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[17]Tiryakian, p. 265.

The distinction, I believe, must be understood more as a heuristic tool than as a normative or actual division amongst practices and theoretical commitments. It would be inappropriate to make a clear-cut distinction between the esoteric and the occult taken as theory and praxis. The occult by necessity involves elements of theory appropriate to its fields of inquiry, as is the case in astrology and alchemy. On the other hand, the active knowledge, enlightenment and imagination of the esoteric may have a practical side that is not necessarily manifested through occult practices. As much as it is helpful to distinguish esotericism or theosophy from occult practices, in practice things are more complex. So, we may tentatively conclude that esotericism involves various techniques of speculative imagination guided by texts of tradition or immediate instruction. Its objective is to attain a higher level of "knowledge", the "transcendent unity of religions," that by definition must be the same to all who achieve it, irrespective of cultural differences, their traditions and initiations. The occult deals more with the aspects of the correspondence between the ultimate reality and the visible world. It may reveal the hidden signification of the world, and a repertoire of techniques for altering the course of events. This more "mundane" aspect of occultism may thus require empirical investigation, observation and experiment.

The first instances of what can be called occultism "in the West" appear in the early centuries of the Christian era in a region dominated by Alexandrian cultural influences. It was combined with esoteric and theosophic elements in an amalgamation that often fused Greek, Christian, Chaldean, and other Eastern influences. The symbolic orientation in Christian theology was open to occult philosophies throughout

the Middle Ages. We find instances of occult teaching in the writings of Albertus Magnus, Thomas Aquinas and Roger Bacon amongst others. The occult philosophy of the Renaissance profited from this medieval legacy. The social, economic and cultural changes that reshaped the nature of scientific investigation affected occultism in a similar way. There was an increasing need to make doctrines more coherent, an optimism concerning the human power to unravel the mystery and a proliferation of bolder hypotheses that would, at times, break away from the tradition. One event, perhaps more than any other, marked the advent of a new interest in the occult. It was the Latin translation of *Corpus Hermeticum* that appeared in 1471. In a Florentine climate that was eager to explore the inheritance of ancient Greece, Cosimo de' Medici entrusted the translation of this text that had recently been discovered in Macedonia to Marsilio Ficino even before any of Plato's works. It was believed that the "author" of the scripts, Hermes Trismegistos, belonged to a far distant past. His texts were supposed to contain the teachings of the *philosophia perenis* and at the same time an anticipation of Christianity. From then on there was a proliferation of magi all over Italy. The trend spread elsewhere. By 1641 there were no less than twenty five editions of *Corpus Hermeticum*. Isaac Casaubon's discovery in 1614 that the texts originated during the early centuries of the Christian era gradually put off some of admirers, but there was still enough interest to prompt an English translation in 1650.[18] The exploration of hermetic teaching is evident in the work of Henricus Cornelius Agrippa and Giordano Bruno in Italy and John Dee and Robert Fludd in England, for example. But even in the works that do not rely on an esoteric discourse, like

[18]See, Fauvre (1994), pp. 58-61.

Copernicus's *De Revolutionibus* or Kepler's *Harmonices Mundi*, we find reference to it. One of the Cambridge Platonists, Newton's contemporary, Henry More, used it to support his metaphysical ideas.

The other important influence that inspired Renaissance occultism was Jewish Kabbalah. The Jews that were expelled from Spain in 1492 migrated mostly towards Italy and stimulated an interesting cultural exchange. Giovanni Pico della Mirandolla was probably the most important figure that Christianized the Kabbalah in yet another quest for origins. It was in the Renaissance that the exploration of those two sources, *Corpus Hermeticum* and Kabbalah, became seen as "occult sciences" revealing the secrets of the nature. The "book of nature", the universe and the "book of revelation", the Bible were two domains that promised the knowledge which may give rise to a new form of religious universalism.

It is important to notice that the knowledge of "occult sciences" in Renaissance and early Enlightenment was not confined to the close circles or restricted to the specialists, be they initiates, enthusiasts, exegetes or commentators. It constituted one corpus of knowledge among many others available for consideration by a large number of intellectuals. Otherwise we would not be able to explain how some of the major figures of the scientific revolution were able to use the ideas that are clearly occult in nature. Due to the studies that were mostly done in the last two or three decades, we now know much more about such instances. For example, in defending

the central position of the Sun, Copernicus called upon Hermes Trismegistus. The Sun-like appearence of the Prime Being as central to the supercelestial world is characteristic of hermetic teaching. By correspondence it may also be applied to the celestial world. Francis Bacon's vitalist-animist world-view not only goes back much earlier than it used to be thought, but it constitutes an attempt at synthesis rather than an occasional excursion. His grandiose reconception of the new science relied on the qualitative method of what was called life sciences, a conception of nature as a battle between the vital spirits and inanimate spirits. This classification scheme was established prior to the inductive-axiomatic method which earned him a pioneering place in history of science. Graham Rees suggests that *Novum Organum*, far from being considered as his crowning work, was perhaps only an intermediate excursus in methodology.[19] Kepler displays profound knowledge of *Corpus Hermeticum* and operates under a strong Platonic conviction regarding a secret correspondence between the structures of geometry and the structures of the universe. Although he disputed the traditional astrological division of the heavens into twelve equal parts, he remained committed to his own rigorously geometrical version of astrology and attempted to integrate it into mathematical cosmology and astronomy. Even Descartes, in his youth, placed imagination before reason and insisted on the unity and the harmony of the cosmos, very much like followers of Raymond Lull. The same influence has a part in Leibniz's concept of *scientia generalis.* As Rossi puts it, "his idea of harmony is founded on texts that one can hardly call "scientific"."[20] Other important evidence of

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[19]See, Rees, pp. 297-314.

[20]Rossi, p. 260.

the interest in the occult in Restoration England was found following the death of Robert Boyle in his fascinating correspondence with Locke and Newton on alchemy.

All this should not suggest that there were no reactions against the occult trends of the time or that the occult ideas were appropriated without a critical eye. Bacon, for example, on several occasions delivered sharp attacks on the alchemists, magicians and Paracelsians. Kepler was involved in a long dispute with Robert Fludd about the nature of numbers and the harmony in the universe. Fludd was criticized, for example, for ignoring the actual units and using abstract symbolic numerical relationships only to impose them on physical reality. Moreover, the association of a particular theory with the term "occult" would, towards the end of the seventeenth and the beginning of the eighteenth century, have a pejorative connotation, implying a questionable epistemological status. This is apparent from Leibniz's attack on Newton's theory that qualifies attraction as an "occult quality".[21] However critical or dismissive these attitudes were, none of them would amount to a programme of scientific research that would exclude the occult instances by devising criteria for distinguishing between occult and scientific practices.

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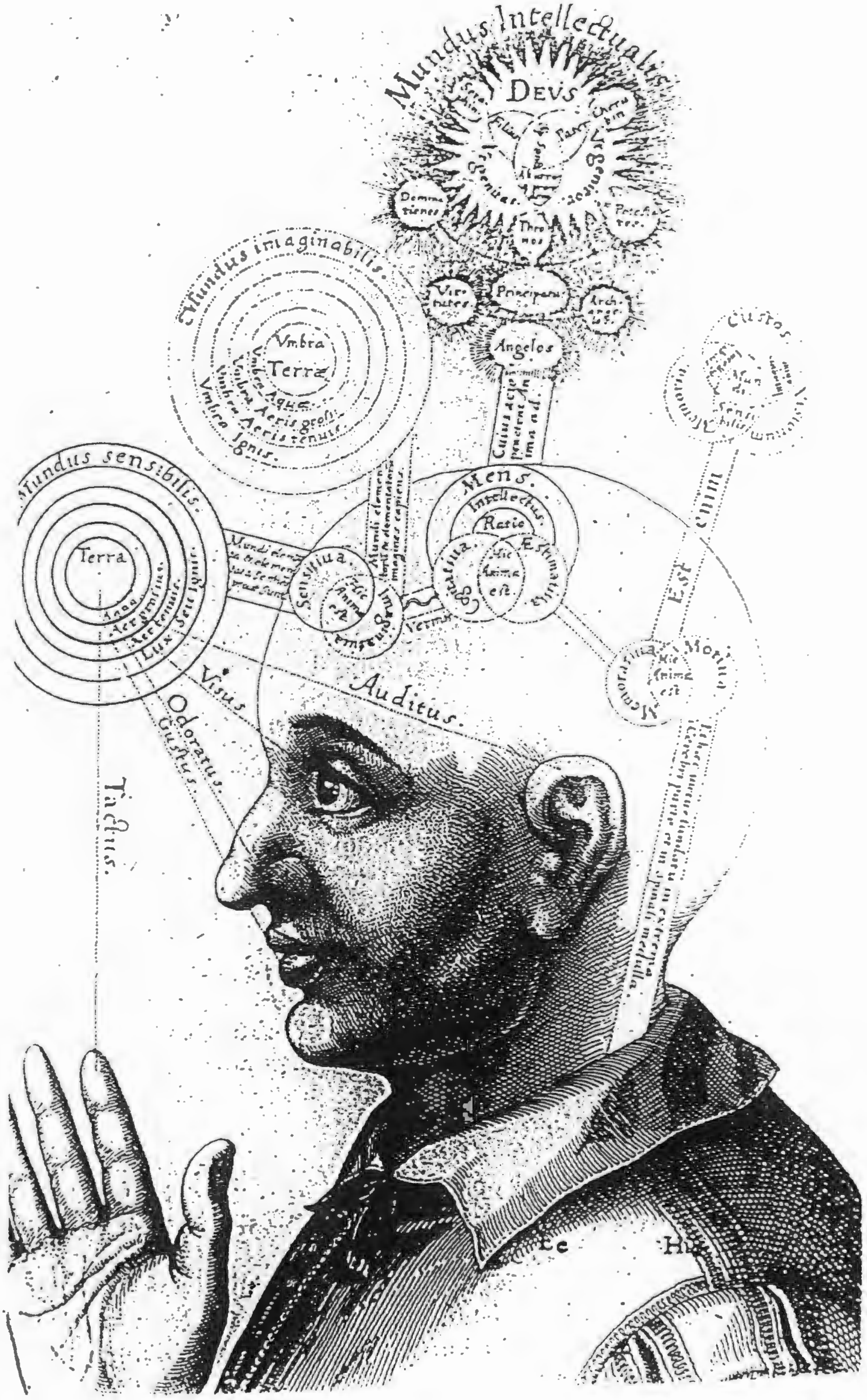
[21]See, *The Leibniz-Clarke Correspondence*, ed. H. G. Alexander, (Manchester: 1956). See also, Koyré, pp. 139-48.


Mundus Intellectualis
DEVS
Angelos
Mundus imaginabilis
Vmbra
Terræ
Mundus sensibilis
Terra
Mens
Intellectus
Ratio
Visus
Auditus
Odoratus
Gustus
Tactus
Est

3 Newton, Alchemy and "The Unity of Truth"

I have decided to give a brief illustration of a conjunction between occult ideas and scientific theories in the case of Newton for several reasons. First, Newton's *Principia* should mark the end of scientific revolution and it is said that the occult influences gradually started to lose their importance. Therefore one would expect Newton to be the least affected. Second, Newton is the single most important figure in the founding of modern science. He provided a paradigm which will dominate the world-view for some time to come and secured the necessary confidence in the "new" enterprise. Third, and most important for this study, Newton's theory had a decisive influence on Kant's conception of science.

The corpus of papers about alchemy that Newton left behind contains approximately 1,200.000 words. The serious study of alchemy started immediately after he took the Bachelor's degree at Trinity College, Cambridge, in the late 1660s and his interest continued for nearly thirty years. Although there are few notes from the late 1690s, it seems that his interest gradually ceased when he moved to London to become the Warden of the Mint in 1695. What is now called his alchemical papers indicate Newton's immersion in the subject, as well as the thoroughness and systematic

character of his study of the occult that would not allow anyone to dismiss it as an occasional interest. Newton's involvement included collecting alchemical books and copying the manuscripts that were not published, adding extensive comments on readings and compiling indexes concerning particular subjects, conducting experiments and communicating this information to a large number of alchemists or scholars familiar with the subject. His collection of alchemical works was probably one of the greatest at the time and it included unpublished treatises and manuscripts that would only later see publication. The extent of his reading may be illustrated by a massive "Index chemicus" containing approximately 5,000 references to more than 150 different works. There was a considerable effort to compile, compare, organize and synthesize the information, perhaps unprecedented in occult practices. But amongst the writings on alchemy we do not only find reading notes, his copies of treatises or vigorous attempts at compiling them. There are also reports of his experiments. So far, we know of two treatises that document experimentation, attributed to Newton. The most important one, "Praxis" was composed in summer 1693, a couple of months before his mental breakdown. There are four successive drafts of it that also describe the process that leads to the ultimate goal of alchemists, multiplication.[22]

But all this information would not amount to more than saying that Newton had a thoroughgoing and secret interest in alchemy or claiming that he was one of the practitioners of the occult. Its significance may be taken in isolation from natural

[22]See Westfall (1984), pp. 317-21.

philosophy, unless we are able to correlate it with his other interests and research. In other words, his research may still be partitioned into the works of Dr. Jekyll and Mr. Hyde, as Thorndike humorously suggested.[23] Indeed, any attempt to account for something like a research programme linking Newton's diverse and apparently incompatible commitments, presently seems to pose a more significant problem than uncovering his involvement in alchemy. It also seems that Newton's path-breaking achievement, as Betty Jo Teeter Dobbs suggested in one of her recent studies, can only be understood by giving special attention to the exceptional flexibility and tolerance with which he utilised different and often antithetical systems of thought.[24] Amongst them we find: Neoplatonism, Cartesian mechanical philosophy, Stoicism, chemistry, alchemy, atomism; biblical, patristic and pagan religion.

Before we try to account for this unusual methodology, at least by our present standards, we need to note what Arthur Quinn called Newton's millenarian attitude. Quinn stresses the profound crisis in thought in the seventeenth century which had been caused by the emergence of scepticism. A large number of different theoretical options carrying incompatible assumptions were competing to replace an old world-picture that was challenged from all directions. Standing side by side they were threatening to undermine the faith in human knowledge. Quinn reports on a discussion

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[23]See Thorndike, p. 589.

[24]See B. T. J. Dobbs ""The Unity of Truth": An Integrated View of Newton's Work" in *Action and Reaction: Proceedings of a Symposium to Commemorate the Tercentenary of Newton's "Principia"*, eds P. Theerman & A. F. Seeff (Newark: 1993).

concerning the response to scepticism between Descartes and John Dury. Descartes believed mathematics was the option most likely to succeed; Dury thought the answer may be found in the study of biblical prophecy. While showing respect for each other's choice, they stayed faithful to their commitments. Newton's response to scepticism assumed a similar attitude, but with the difference of taking into consideration a larger number of alternatives and attempting a synthesis. In a reaction to the scepticism of his age, he adopted an attitude from the opposite side of the pole which was guided by the research in both mathematics and biblical prophecies. Therefore Quinn tells us:

> The rediscovery of the *prisca theologia* by Newton and his contemporaries was a crucial sign of the beginning of the end. Daniel had written, "Many shall run to and fro; and knowledge will be increased." Columbus had begun the fulfilment of the first half of the prophecy; Newton was finishing the second half. Understanding the prophecy itself was a part of it. Every prophecy understood brought closer the time to the end. Hence it is easy to understand why Newton should have been so excited by the developments in the Biblical interpretation of his own time.[25]

The interest in apocalyptic prophecies must be understood in the context of the intellectual climate and especially Newton's association with Cambridge Platonists.

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[25]Quinn, p. 182.

Some of the events from the 1670s indicate that Newton's approach to research and the way it was made public was a part of the collaborative effort within the group of Cambridge Platonists. In 1672 Newton made public his paper on the theory of colour and spent four years answering various objections to it. In 1676 Ralph Cudworth, one of the leading Cambridge Platonists published his *True Intellectual System of the World* in which he attempted to reconstruct systematically and publicly the *prisca theologia*. The public response to the book was extremely disappointing to Cudworth as well as to his associates. It is not just that his interpretation of apocalyptic vaticinations was not appreciated, but he was even accused of atheism and materialism, the very trends that he wanted to dismiss. In that same year the other leader of the Cambridge Platonists, Henry More, announced that he was giving up philosophy and that he would not get involved in any discussions with those who did not take the Bible as revelation. It was also the year that Newton refused to respond to any further objections to his theory of colour and withdrew from public philosophizing. Only a persistent and persuasive effort from Halley convinced Newton to publish *Principia* a decade later.[26] The reception of Cudworth's book might have made clear to Cambridge Platonists that in spite of their advancement of knowledge, they could not make it public, at least not indiscriminately. It may also explain why a good part of Newton's writings was never made public and why we can therefore talk about a public and a private Newton.

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[26]Ibid., pp. 182-3.

In response to the scepticism of his age, Newton shared an assumption with many of his contemporaries: the assumption of the unity of truth.[27] According to Dobbs, it implied several things. First, the idea that truth was accessible to the human mind. Second, that the truth was one and that its unity was guaranteed by the unity of God. True knowledge was always in some sense a knowledge of God. The "book of nature" and the "book of revelation", reason and prophecy, were not in conflict but complementary. Hence, natural philosophy had immediate theological meaning in revealing aspects of the divine never recorded in the Bible. Third, stemming from the second, is a further assumption that different attempts at gathering and organizing knowledge coming from different traditions, having different modes of explanation and legitimation, may actually have the same grounding. To Newton they tended to appear complementary rather then competitive. The appearance of their incompatibility is due to the fact that their truth is partial, in the sense that they reveal one aspect of Being and reduce the rest to that mode of explanation. The unified truth, knowledge of God and all His works, may be achieved by a synthetic effort which draws from every available source: mathematics, observation, reason, revelation, historical records, myth, and so on. Inevitably, Newton would come to the point when various lines of investigation came into conflict and partial truths were irreconcilable. It is here, according to Dobbs, that Newton did his most creative synthetic work, sometimes by bringing in a third party to bear upon the problem. A single-minded pursuit of each of the diverse studies that he undertook made it extremely difficult to establish

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[27]On the Renaissance concept of the unity of truth, see Kristeller, *Renaissance Thought*, pp. 196-210. On the concept of "right reason" that should balance between experience, reason and revelation, see L. Mulligan's "'Reason,' 'right reason,' and 'revelation' in mid-seventeenth-century England" in Vickers (1984).

Newton's pluralistic method. Whether he wrote on mathematics, mechanistic philosophy, alchemy, chemistry or theology, his writings would leave an impression that no other considerations mattered. Even the studies of different subjects that he wrote at approximately the same time would not stray from an isolated line of investigation. However, I will examine the notoriously controversial case of the "cause" of gravity in order to illustrate how some apparently isolated studies might be put together.

Cartesian mechanistic philosophy seemed to be a challenge for Cambridge Platonists as much as an inspiration. Much of their effort was dedicated to finding a viable alternative to mechanistic philosophy that was by the end of seventeenth century widely accepted by the community of natural philosophers. Their reservations concerned the cohesion and differentiation of living forms that intuitively seemed to be qualitatively different rather than quantitatively explained by the mechanical motion of the particles of matter. It is the same problem that encouraged Kant to examine the possibility of *vis viva*, the living forces, in Leibnizian terms, at an early stage of his career. Those speculations stopped, as we will witness, following his methodological considerations in *Dreams of the Spiritseer*. Newton, in accordance with Cambridge Platonists' presuppositions, equally expressed disbelief in the mechanical mode of explanation in this respect. It seems that it was largely this problem that made him explore a wide variety of alternatives to mechanistic philosophy. Quinn states that two candidates to replace mechanistic explanation, suggested by Henry More, were,

absolute space and gravity (a force acting at a distance).[28] Eventually both became fundamental concepts of Newton's physics. But before such development, Newton examined a third candidate in the paper on the theory of colour from 1672. It is an old neoplatonic idea, largely endorsed by occultists as much as by theologians, that interprets light as a manifestation of the spiritual. White light, in particular, stands for purity, spiritual and moral. In one of his theological manuscripts, Newton suggests that coloured light on the other hand, represents our present fallen condition. According to Cambridge Platonists' thinking that hinges on gnostic principles, coloured light is a mixture of white light with darkness. Newton undertook experiments in order to examine this proposition. The outcome was clearly negative. It demonstrated that white light far from being "pure," is really a mixture of coloured light. According to the outcome of the investigation light should be seen as a stream of microscopic particles that behave like projectiles. The implication of the experiment seemed to support corpuscular theory over neoplatonic theory, material explanation over spiritual.[29]

True to this discovery and the principle of balancing the alternatives in accordance with the evidence, Newton's early conception of gravity requires a mechanistic explanation. Mechanistic philosophers would conceive the force of gravity in macroscopic bodies as resulting from an aethereal medium that filled up space. Newton's explanation accordingly involves the impact of pressure of fine particles of

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[28]See, Quinn, p. 183.

[29]See Ibid., pp. 183-4.

matter, imperceptible to the senses, as the cause of the phenomena that are now extended to the objects on the surface of the earth and all bodies in general. Although Newton was still looking for alternatives in alchemy and perhaps elsewhere, even his alchemical papers from this period offer supporting evidence for such a position.[30] Dobbs explains how his stand changed after he mathematically demonstrated in 1684 the general area law for bodies revolving around a centre of force. To his satisfaction, there was mutually supporting data from both mathematical demonstration and observation. The former matched Kepler's area law concerning the planetary motion around the Sun. According to Kepler's hypothesis, a planet's velocity, at a right angle to the radius vector, was inversely proportional to the distance from the Sun. As a consequence, a planet moved more rapidly at the point when it was closer to the Sun than when it was further away. The most significant difference in velocity happens between perihelion and aphelion, the closest and most distant point. Kepler's hypothesis received empirical verification together with his later discovery of the elliptical orbit of Mars, through Tycho Brahe's observational data. Newton's demonstration was liable to supersede two of Kepler's laws, because it included the component of inertia and could explain a wider range of phenomena. However, from this arose another problem. Newton's more exact calculation of Kepler's area law could not fit so closely with empirical observation if one sought mechanistic explanation. As noted, mechanistic philosophers postulated an aethereal medium that supposedly filled the heavens. If that was the case the planets should encounter enough resistance from the medium to cause an observable deviation from the mathematical predictions.

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[30]See Dobbs, p. 113.

Therefore, the only possible way to save mechanical explanation would be to hold a far-fetched and *ad hoc* hypothesis that the medium somehow moves at exactly the same variable speed of the planets. That same year Newton undertook new pendulum experiments to test aethereal resistance. He found that the resistance is nil or insignificantly close to nil. After a couple of months speculating about the "non-resisting" medium, in 1685 he concluded "that by far the largest part of aethereal space is void, scattered between aethereal particles."[31] With the rejection of the option of an aethereal medium as a material substance responsible for causality by physical impact, he abandoned the option of the mechanical causation of gravity. With it went the possibility of materialistic explanation of this phenomena. For Newton held it as absurd to see gravitation as an inherent property of matter. This can be illustrated by the following passage from a letter to Bentley in 1692:

> It is inconceivable that inanimate brute matter should, without mediation of something else which is not material, operate upon, and affect other matter without mutual contact; as it must do if gravitation, in the sense of Epicurus, be essential and inherent in it.[32]

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[31]Quoted in Dobbs, p. 114. For Dobbs's account on how Newton shifted away from mechanical explanations, see pp. 113-17.

[32]Quoted in Easlea, p. 182. Towards the end of his life it seems that Newton returned to the idea of aether as a cause of gravity. However, this later concept of aether was very different from the one conceived by mechanistic philosophers. It was an idea of "incorporeal medium" that interacted with matter continuously and intimately. Dobbs suggests that this was the reason Newton searched in the scripture for information on the nature of Christ's body before and after the Incarnation. She also states that he might have found some supporting evidence for the new conception of aether in Hauksbee's electrical experiments. See Dobbs, p. 117. See also, Quinn, n.13, pp. 183-4.

It was from about the time of the publication of *Principia* in 1687, that the intensity of Newton's alchemical research dramatically increased.[33] As I will try to show, it seems quite likely, to say the least, that he now looked at alchemy more seriously as a source of a plausible alternative to a mechanistic explanation of gravity. But even the idea of "the force acting at a distance" was enough to stir, initially, quite a wide disbelief among natural philosophers. His contemporaries that were most capable of appreciating the mathematical calculations and the technical problems of dynamics, like Huygens, Leibniz, or Bernoulli, never admitted the possibility of attraction at a distance. Leibniz even launched an attack suggesting that it was a return to the enthusiastic philosophy of Robert Fludd. His main objection, however, was that gravity as treated by Newton's theory may only have the status of occult qualities. Much of the discussion that followed, involving Clark, Cotes, Conti, and Newton indirectly, on one side, and Leibniz and latter Fontanelle, on the other, revolved around this qualification of "occult qualities." The connotation that Leibniz gives to the term "occult qualities," although clearly pejorative, seems quite loose, as can be seen in a letter of 1711 to Hartsoeker:

> Thus the ancients and the moderns, who own that gravity is an *occult quality*, are in the right, if they mean by it that there is a certain mechanism unknown to them, whereby all bodies tend towards the centre of the earth. But if they mean, that the thing is performed without any mechanism, by a simple *primitive quality*, or by a law of

[33]See, Westfall(1984), p. 329.

> God, who produces that effect without using any intelligible means, it is an unreasonable occult quality, and so very occult, that 'tis impossible it should ever be clear, tho' an Angel, or God himself, should undertake to explain it.[34]

From this paragraph it may be concluded that occult qualities are permissible as long as they assume a certain (mechanistic) explanation. But if they are used in a sense that does not allow any explanation, in terms of intelligible means of God's production of them for example, it is unreasonable to retain them. This concern was reiterated four years latter in a letter to Conti in somewhat different terms:

> If every body is heavy, it follows (whatever [Newton's] supporters may say, and however passionately they deny it) that Gravity will be a scholastic occult quality or else the effect of a miracle. . . It is not sufficient to say: God has made such law of Nature, therefore the thing is natural. It is necessary that the law should be capable of being fulfilled by the nature of the created things.[35]

It seems that Leibniz's argument, in both cases, assumes that metaphysical explanation which involves certain type of mechanisms, such as the impact of physical particles, is sufficiently established in the scientific community. It is not enough to challenge this mode of explanation, as Newton does, solely on the basis of mathematical

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[34]Quoted in Koyré, p. 141.

[35]Ibid., p. 144.

explanation of the phenomena ignoring the status of their causes. Since metaphysical considerations are by-passed, and an explanation of what causes gravity is lacking, the whole theory relies on a postulation of occult qualities.

After reading Leibniz's second letter, Newton wrote to Conti:

> As for philosophy, [Leibniz] colludes in the signification of words, calling those things miracles which create no wonder, and those things occult qualities whose causes are occult, though the qualities themselves be manifest.[36]

Newton thus accuses Leibniz of manipulating the meaning of the term "occult qualities." The emphasis of his theory is on **manifestations**, not on its **causes**. The most comprehensive reaction to Leibniz's accusation can be found in the Query 31, added to the second edition of *Opticks*. In an often quoted passage he takes this line of defence further:

> These principles I consider, not as occult qualities, supposed to result from specific forms of things, but as general laws of nature, by which the things themselves are formed; their truth appearing to us by

[36]Ibid., p. 144.

> phenomena, though their causes be not yet discovered. For these are manifest qualities, and their causes only are occult.[37]

He goes on to argue that the term "occult qualities" was coined by Aristotelians to designate qualities that are inherent and "hidden" in bodies. Such qualities refer to unknown causes of manifested effects, not to the manifestations. The causes of gravity, but also of fermentations, magnetic and electric attractions, may be considered as occult qualities in as much as they are supposed to be unknowable. If such causes are left as mere speculations that by definition can never find supporting evidence, they are not of any use to natural science and therefore should be rejected. However, this is not the case with his theory. First, it establishes the general principle of motion from phenomena, that is, manifest effects, that has a great explanatory power concerning all corporal things. Second, Newton expresses belief that its causes are not unknowable, but are "yet to be discovered."

From the public response to *Principia*, and Leibniz's reaction in particular, we may conclude that the idea of action at a distance as presented by Newton, was contrary to some basic assumptions of natural philosophers at the time. Since Newton refused to give any metaphysical elaboration as to its causes, the charge of being scholastic, miraculous and occult had a serious weight within the framework of current natural philosophy. But, we may ask, what enabled Newton to propose such a novel and

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[37] *Opticks*, p. 542.

daring theory? How can we explain his shifts from mechanical causality to alchemy, from consideration of material causes to spiritual ones? I would argue, along with Quinn and Dobbs, that it was his openness to considering a variety of options simultaneously, giving priority to one or another as evidence grew and research strategies changed. Amongst them, and contrary to today's practice, we find Hermetic ideas, alchemy in particular, and biblical prophecies. Newton continued searching for the cause of the general principle of motion until the end of his life. Since such causes and the unity of truth had not been discovered during his lifetime, despite his early millenarian hopes, his own assessment of his achievement was modest. Towards the end of his life, he said that "he had been only like a little boy at the seashore picking up now and again a smoother pebble or a prettier shell than usual while the great ocean of truth lay all undiscovered before him."[38]

Finally, if Newton looked to alchemy to find the "occult" causes of gravitation, we may ask, what sort of evidence or explanation was he hoping to find? First of all, it was an alternative to mechanical causation in general. At the same time, alchemy would identify principles at work in the organization of matter that would directly point to divine activity in nature. As we have seen this idea was dear to Cambridge Platonists. Alchemical literature claimed to provide information about a vital agent or a fermental virtue, as Newton sometimes called it. If mechanical action could account for many classes of phenomena, it was not able to explain, according to Newton, the

[38]Dobbs, p. 106.

apparently spontaneous processes of fermentation, putrefaction, generation and vegetation. It is exactly this type of processes that alchemists attempted to explain by an ultimate active principle. In Query 31, a revised and extended version of "Conclusio" to *Principia*, initially suppressed, a large part is dedicated to an examination of attraction involved in chemical reactions. We find there that the cause of gravity and the cause of fermentation involve the same type of causality due to active principles:

> Seeing, therefore, a variety of motion which we find in the world is always decreasing, there is a necessity of conserving and recruiting it by active principles, such as cause of gravity, by which planets and comets keep their motion in their orbs, and bodies acquire great motion in falling; and the cause of fermentation, by which the heart and blood of animals are kept in perpetual motion and heat; the inward parts of the earth are constantly warmed,. . . For we meet with very little motion in the world, besides what is owing to these active principles. And if it were not for these principles, the bodies of the earth, planets, comets, Sun, and all things in them, would grow cold and freeze, and become inactive masses; and all purtrefaction, generation, vegetation and life would cease, and the planets and comets would not remain in their orbs.[39]

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[39]*Opticks*, p. 541.

Richard S. Westfall offers a suggestion of how Newton conceived of the attraction involved in chemical reactions. In one of his alchemical papers, known as "The Vegetation of Metals," Newton singles out vegetation as responsible for "obvious laws and processes" in nature. According to Westfall, the central theme of the essay is that vegetation is the effect of spirit which is "y^{e} same in all things." This process varies according to the degree of maturity and to the type of matter it animates. An insight into the workings of vegetation is possible by examination of the vegetation of metals.[40] Thus Newton offers a following distinction between vegetation and purely mechanical changes,

> There is therefore besides y^{e} sensible changes wrough in y^{e} textures of y^{e} grosser matter a more subtile secret & noble way of working in all vegetation which makes its products distinct from all others & y^{e} immediate seate of thes operations is not y^{e} whole bulk of matter, but rather an exceeding subtile & inimaginably small portion of matter diffused through the masse w^{ch} if it were seperated there would remain but a dead & inactive earth.[41]

In the "Conclusio" as well as in the Query 31, Newton described a large number of chemical experiments that were available in chemical writings such as Boyle's. However, the manner in which they were described is novel. The chemical reactions are explained as an effect of attraction and repulsion of particles of matter of different

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[40]See Westfall (1975), pp. 219-21.

[41]Quoted in Westfall (1984), p. 326.

chemical substances. Westfall claims that such a conclusion could be found neither in Boyle nor in alchemical literature. It is based on Newton's own elaborations of the concept of an active principle borrowed from alchemists. This conception is further developed in the paper "De natura acidorum" from the early 1790s into the more elaborate Newtonian explanation of attraction. With this development, we witness the unfolding of the concept of force, which, Westfall notes, is frequently expressed in a manner that closely resembles its explication in alchemical literature. Newton's alchemical writings regularly posit philosophic sulphur as an ultimate causal agent in nature. In "De natura acidorum" we find that the activity of sulphur springs from the acid that it conceals. The following should illustrate that attractive force is due to the activity of acids:

> The particles of acids, Newton asserted in a statement that grasps [the] world [of alchemy] in one embrace with his own concept of force, "are endowed with a great attractive force and in this force their activity consists by which they dissolve bodies and affect and stimulate the organs of senses."[42]

Finally, I would like to stress that my argument does not rely on whether the idea of action at a distance stems from alchemy or whether the explanation of its causes is to be found in Newton's alchemical research. What seems to me to be impossible to deny

[42]Westfall (1984), p. 329.

is that Newton considered alchemy as a viable option that was able to help solve the problems which he encountered in the conception of his theory of gravitation. If he ever had reservations concerning occult qualities, those were connected to a narrower meaning of the word "occult", such as can be found in theories which postulate causes that can never be (empirically) uncovered. Clearly, he never considered the explanations in alchemy as being of this sort. Therefore, rather than confining his methodology to one secure mode of explanation of phenomena, his research interests were open to a wide variety of systems of thought and their explanatory strategies, which included occult instances as sketched above.

In a span of time between, let us say, Newton's *Principia* and Kant's *First Critique*, there was one figure that may be considered as introducing radical changes in this respect. As far as I can gather, David Hume never expressed interest in any of the occult teachings. In his mature years this would be quite surprising considering the vigour with which he criticized religious beliefs. His persuasion that only common sense and experience may be taken as proper grounds of knowledge went as far as rejecting a good part of the deistic world-view that was widely endorsed by intellectuals in the eighteenth century. He not only introduced a much weaker claim about the nature of causal relations, but questioned the plausibility of many particular causal explanations, mechanical and theological alike. Moreover, it is often said that his rejection of metaphysics *tout court* was an instrumental step towards the establishment of modern science. In opposition to Newton, who had some sort of millenarian approach, Hume's position was a sceptical extreme. More modest beliefs

about knowledge required an acknowledgement of the limitations of human capacities, such as his verdict that "ultimate springs and principles are totally shut up from human curiosity and inquiry" or that questions "concerning the origins of worlds. . . lie entirely beyond the reach of human capacity."[43] So, as much as he admired Newton's achievements in "experimental philosophy," he despised Newtonian theologians who tried to capitalize on them.

But another facet of Hume's scepticism prevented him from devising a clear set of demarcation criteria. Scepticism, in Hume's case, implied some sort of levelling of knowledge-claims. For, as Antony Flew suggested, Hume's philosophy should be characterized as "Philosophy of belief." It implied that the existence of objects of our consciousness as well as those in the external world can only be established under the constraint of **rational belief** in causal relations. This belief constitutes the basis of any scientific investigation.[44] One need not go as far as Flew in asserting that Hume's critical analysis of religious teachings and practices is based on a psychological theory of belief. Even if we assume that "Hume presupposed the validity of a distinction between rational and irrational belief," or if we deny J. A. Passmore's view of Hume's "identification of logical with psychological problems,"[45] as James Noxon does, his "rules by which to judge of causes and effects" would not suffice as operative criteria

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[43]Quoted in Noxon, p. 72-3.

[44]See, Antony Flew *Hume's Philosophy of Belief* (London: 1961); see especially pp. 243-73.

[45]See Noxon, p. 180.

of demarcation.[46] It is apparent that Hume never intended his methodological procedures as a programme for the development of natural sciences, so central to the later conceptions of science. After some early interest, Hume almost completely neglected the contemporary research in natural sciences and dedicated himself to making a contribution to "Moral philosophy." As is well known, Kant attained a more optimistic view than Hume concerning the status of human knowledge in general and scientific practices in particular. Partly as a response to Hume, he ventured to defend science against attempts to undermine and destabilize it. He felt that Hume's philosophy fell far short of accounting for true human capacities and the establishment of a secure basis for scientific endeavours. It seems that a large part of the present scientific community, as much as the eighteenth century's,[47] shares this concern with Kant.

I intended to do no more in this chapter than point out that recent studies of the scientific revolution and Newton in particular, make a strong case for saying that there was no strict demarcation between the scientific and the occult along the lines of knowledge and pseudo-knowledge. In the case of Newton this means that an occult

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[46]Noxon seems to acknowledge this when he says, "Newton's purpose was to construct a conceptual model of the physical universe, Hume's to undermine philosophical conceptions of the physical world"; see, p.81. Karl Popper finds that the problem of demarcation is properly Kantian, while induction, not sufficient for demarcation, is Hume's problem. See, *Conjectures and Refutations* (New York: 1963), pp. 33-41.

[47]For example, assessing Thomas Reid's reception of Hume's philosophy, in a form of agreement L. L. Laudan says, "As Reid interpreted Hume, empiricism was no longer able to distinguish between the merits of, say, the astrologers and the classical mechanicians and therefore was no longer appealing as a philosophy of science." See, p. 107.

practice like alchemy was considered as offering a supplement to other scientific procedures. In addition this also implies a plurality of theoretical frameworks, e.g. Biblical study and different aspects of the occult corpus, alchemy, astrology, Neo-Platonism, vitalistic ideas and so on, which may contribute to scientific research. In what follows my intention will be to suggest that Kantian philosophy introduced a significant change in attitude. Kant not only insisted on a clear and decisive demarcation between knowledge and pseudo-knowledge, but also shaped the demarcation lines against the background of an occult practice. Instrumental for his conception of demarcation was the encounter with the occult teaching of Swedish spiritseer Emanuel Swedenborg. Kant will refer to this aspect of the occult, i.e. Swedenborg's description of the spiritual world, as *Schwärmerei*. In the following chapter I will analyze in some detail Kant's encounter with Swedenborg and the problems that *Schwärmerei* posed for him.

Chapter 2

Swedenborg and The Problem of *Schwärmerei*

> He who loves the soul in its transparence, that is to say, in its simple nature, hates it and is its enemy in its earthly guise. He hates it, and he is sad and is afflicted that it stands so far from the clear light that it is in itself.
>
> Meister Eckhart, *Sermon, "He Who Hates his Soul in This World"*

> Folly and wisdom are separated by such indistinct borderlines that one can hardly walk for any length of time on the path of one without straying into the path of the other.
>
> Kant, *Dreams of a Spiritseer*

Immanuel Kant's intellectual development is a good example of a search guided by his own principle of autonomy which was articulated only when the foundations of Critical philosophy had been formulated. It should not be surprising that Critical philosophy emerged after long-lasting considerations of new scientific theories in different fields and examinations of a wide variety of possible groundings for knowledge. His early works were concerned with natural philosophy in a narrower

sense, namely, physics, astronomy, and geography. But among Kant's early wanderings his interest in Emanuel Swedenborg is certainly quite atypical in this context and one that created the most controversy amongst his contemporaries. By contrast, subsequent commentators have taken little, if any notice, of this event that was documented in some of Kant's writings. They consist of a polemical booklet, *Dreams of a Spiritseer*, a short *Essay on Diseases of the Mind*, and a few related letters. There are also a number of lecture-notes on Swedenborg taken by Kant's students. Apart from a couple of hints amongst the early commentators indicating that it might be significant for understanding his critical enterprise[1] and some recent analyses,[2] Kant's interest in Swedenborg has stood in comparative isolation with respect to the emphasis given to the other precritical writings. Hardly any presentation of Kant's philosophy, one of the most commented philosophical doctrines in Western scholarship, bears extensive references to this interest. *Kant-Studien*, for example, probably the most prominent publication on Kant's corpus has not published a single article on *Dreams* in its more than one hundred years of existence.[3] There seems to be some indication that Kant himself looked upon it as marking a displeasurable episode, best to be forgotten. In *Dreams*, as well as in his correspondence that followed its publication, he expresses

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[1]See, B. Erdmann's *Kants Kriticismus* (Leipzig: 1878) and H. Vaihinger's *Commentar zu Kants Kritik.*

[2]See, C. D. Broad's "Immanuel Kant and Psychical Research" in *Religion, Philosophy and Psychical Research*, R. E. Butts's *Kant and the Double Government Methodology* and M. David-Menard's *La Folie dans la raison pure.*

[3]This information was found in the Introduction to the English edition of *Dreams* by its translator J. Manolesco. He examined all the issues of *Kant-Studien* until the publication of the book in 1969. I checked the subsequent issues and all I could find was a review of the new German edition of *Dreams* in 1983.

regrets for being involved in it in the first place. He blames the circumstances for being put in a position where he could not avoid voicing his opinion about a subject outside his field of expertise.

Kant and Swedenborg both came from the Baltic region, the outskirts of the European cultural scene at the time. Some similarities in terms of their early interests may be found between two the Immanuels. At an early stage of their lives, they were preoccupied with Newtonian physics and both tried to expand its principles by explaining the origins of solar systems in the genre of Natural History. What is now known as a nebular theory, generally attributed to Kant and Laplace, had been first elaborated by Swedenborg in his *Principia*, published in 1734, as the first part of his *Opera Philosophica et Mineralia*. Here, Swedenborg presents his idea of the derivation of planets and their moons from their suns. The sun he assumed to be a mass of matter in a state of incandescence, revolving by inherent vortical force. From this body were thrown off vapours, which gathered into a nebulous ring in the plane of the equator. By condensation this ring became more and more solid, and at length broke and scattered into space, the masses of which subsequently formed the planets and satellites of the solar system.[4] Kant's first publication after becoming a *Privatdozent*, *Universal Natural History and Theory of the Heavens*, published in 1755, deals with the same subject. There is no direct evidence that Kant was familiar with Swedenborg's hypothesis, as he was with the other contributions to the development

[4]See G. Trobridge *Swedenborg: Life and Teaching*, p. 236.

of the nebular theory, such as those of Buffon, Herschel and Laplace. Since he mentions the names of previous contributors it seems fair to assume that he did not know about Swedenborg's theory. Kant's theory differs in respect to the formation of the planets. He supposed that the planets in our solar system have arisen through a conglomeration formed immediately out of the original vapour mass and not from the shattered ring, as Swedenborg suggested.

So there was a common interest between them in the advancements of modern science and equally in the search for ultimate answers. They both experienced the fruitation of their efforts at a later stage of their lives. But while Kant spent his entire life in Königsberg, a trading city away from European cultural centres, Swedenborg travelled extensively throughout Europe, even in his early eighties, and spent more time abroad than at home. There was also a difference in respect to their social background and prestige. Swedenborg was a son of a bishop and a mineowner. His family had been ennobled by the Swedish Queen in 1719, and Swedenborg as the oldest son automatically became a member of the Swedish House of Nobles, one of the four houses of Parliament. Religious figures in Sweden found it impossible to impose a ban on the importation of his books because he was well connected with the Royal Court and acquainted with a few European heads of state. He was a member of the Academy of Science of St. Petersburg and one of the first elected members of the Royal Academy of Sciences in his own country. Swedenborg never considered wealth as a preventing factor for moral development. Kant, on the other hand, was born into an artisan family; his father was a saddler. He struggled in the poverty of a *Privatdozent*'s

salary until the age of forty-six, when he was finally appointed to a proper chair in metaphysics at the University of Königsberg. This contrast alone could have accounted for some resentment.

At a time when Kant wrote to Swedenborg, most probably around 1763, requesting some clarification on his teachings and perhaps further correspondence, he was still an obscure figure in Germany. Not even the second-place effort in the competition of the Berlin Academy for what became known as the *Prize essay*, nor the considerable success in academic circles of The *Only Possible Basis for a Demonstration of the Existence of God*, could earn him the professorship at the University of Königsberg. Although he already corresponded with some of the most prominent German intellectuals, such as Moses Mendelssohn, Johann Heinrich Lambert, and Samuel Formey, Kant's public exposure could hardly expand over the local boundaries of his home-town. This may be the reason why Swedenborg never directly replied to Kant's letter and referred Kant, through intermediaries, to his new book, soon to be published, in which he could find detailed answers to all of his questions. It may not be altogether implausible that Kant did not take his disadvantaged position nor his "inadequate" treatment lightly when he described Swedenborg in *Dreams* in the following way,

> There lives at present in Stockholm a certain gentleman by the name of Swedenborg. He has no function, no job, yet manages to live well on his not inconsiderable income. His entire activity, as he himself

> says, consists of having close communications with spirits and departed souls, and this over the last twenty years or so.[5]

It is unlikely that Kant found the requested answers in the indicated book or in *Arcana Coelestia,* which he investigated thoroughly. This is in light of Swedenborg's style as well as the type of questions treated in *Dreams.* But even if he did find some answers they certainly turned out to be quite disappointing. Kant calls *Arcana Coelestia,* "twelve quarto volumes of shear non-sense". As for Swedenborg, he never publicly reacted as to defend himself from sharp attacks launched by Kant in *Dreams.* We may only speculate that he figured that the difference in social stature allowed him to stay unscathed even if he ignored the challenge. In the course of this study we will be able to see that Kant's problematic derived from this encounter certainly went far beyond any personal matters. Before we turn to Kant's concerns, however, it will be necessary to briefly present Swedenborg's exalted doctrine.

1 Swedenborg's Travelogue

Swedenborg's writings, scientific and prophetic, have never been a focus of much academic attention. His name is usually followed by swift remarks of disapproval or

[5] *Dreams*, p. 75.

admiration. His commentators are most often Swedenborgians themselves, uninterested in a critical assessment of his work. All attempts to justify or refute his later claims ceased after Kant's endeavour.[6] They seemed fruitless either from the point of Kant's conclusions or in the light of the stumbling-blocks that he encountered. Determining the status of Swedenborg's exalted visions is to no avail for our present study. My sole interest is with the delegitimization of such knowledge-claims by Kant. Swedenborg features only as an instigating factor that offered "deceptive" material, at first appealing to Kant, only to be rejected later. However, his role needs to be fully determined. There are hints in the vast Kantian scholarship that Swedenborg had a lasting influence on Kant in terms of the two world division, *mundus sensibilis* and *mundus intelligibilis*, appropriate to the use of theoretical and practical reason respectively. Furthermore, Swedenborgians have tried to imply that Kant himself was throughout his life a concealed Swedenborgian. We will deal with those problems later. But in order to investigate Kant's approach and reaction to occult phenomena, as well as the alleged impact of Swedenborg' doctrine, we need to give a concise account of it. The question of the epistemological status of Swedenborg's professed knowledge will be left for Kant's inquest. This will allow us to treat Swedenborg's report as a narrative, in other words, as what it claims to be: a story that recounts the impressions and experiences of travel into another world which reveal its relations to and underlying significations for our present residing place.

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[6]One exception is Broad's attempt to find historical evidence in Swedish archives that would match Kant's accounts of Swedenborg's alleged paranormal visions. See, Broad, pp. 150-5.

Although Swedenborg spent most of his life travelling around Europe exploring foreign countries and making acquaintances, his later writings account for a different voyage. They describe alleged journeys to the world of spirits not in the catalogue of any modern travel agency. In his late fifties, visions and communications with the entities from this remote place started to appear to him. This increased mental activity was described in his diary and notes of his dreams in the 1740s. His report tells us that in this period he was in such an emotional torment that he almost ended mentally impaired. However, after the period of various temptations and personal struggle, he entered a world not yet seen by human eye. He was allowed to explore the newly discovered place by daily encounters with spiritual entities residing there. He conversed with entities from different levels and societies inhabiting this hierarchically structured world. His scientific inquisitiveness was triggered to the full and he investigated the terrain as much as he could and spent the remaining twenty years writing about his explorations and experiences. His first book after the initiation was the twelve quarto volumes of *Arcana Coelestia*. It is a comprehensive commentary on the Bible that claims to unveil its hidden spiritual meaning not available to the uninitiated who take it in its literal sense. Amongst more than twenty other writings written later, *Heaven and Hell* is the best known, for it offers the summary of *Arcana*, supplemented by stories of his encounters.

Swedenborg's style is quite dry but submissive. His simple and unassuming style may be surprising since he writes in Latin accessible only to more intellectual and sophisticated readers at the time. Unlike his scientific writings, he more often than not

uses ordinary language and basic concepts of present day psychology, like understanding, will, affection and memory. His use of metaphor seems to reflect the need to be accessible to a Christian reader. Even so, as many commentators have noticed, his perpetual listing and repetition makes it, at times, tedious reading.

In *Heaven and Hell*, Swedenborg gives us some indication of how he gathered the information presented in the book. During thirteen years of supernormal experience, he tells us, he conversed with more than a hundred-thousand spirits. This communication took place through three different modes: 1) in a wakeful state of the body, 2) in a state of abstraction from the body that happened after he was brought into the state between sleeping and waking, and 3) as an experience of being carried by the spirits to another place. The first kind of communication is by far the most frequent one and it enabled him to inquire about many different aspects of the spiritual world. He was granted permission to speak to many spirits he knew in their bodily life and also spirits from different levels of the celestial order. The withdrawal from the body took place only "three or four times". In this spiritual state, senses of sight, hearing and touch are even more alert, so that he was able to touch the spiritual entities. That was meant to serve as evidence that spirits and angels (depending on the position in the hierarchy) enjoy the same sense impressions that men and women here on earth do. Finally, according to one instance described by Swedenborg, the experience of being carried to another place consists of visions of cities and different landscapes, as well as various other objects with no reference to distance or the time span of such experience.

The title *Heaven and Hell* adequately defines the boundaries of the place Swedenborg wants to describe. This place is a parallel world, *mundus intelligibilis*, on the basis of which our natural world, *mundus sensibillis*, exists and subsists. It is enclosed on all sides except by narrow passages, the entrances of which are guarded. Between heaven and hell is an intermediate step, the "world of spirits," where men and women are brought after death in order to be prepared for either heaven or hell. Heaven and hell consist of a few hierarchically ordered levels according to their participation in divine illumination. They, on each level, consist of innumerable diverse societies that group spirits according to their resemblance in inner structure. Every entity is assigned to its rightful place, so that one cannot ascend from the lower to the higher heaven or *vice versa* without painful anxiety.[7]

According to Swedenborg, the spiritual world is, in more ways than we usually believe, similar to our natural world. Spirits possess the capacity of sense perception in relation to the other individuals and objects in their "possession", such as garments and homes.[8] Heaven and hell are ruled by God but regulated by an administrative structure to which the angels are assigned according to their inner and practical capacities. Employments concern ecclesiastical affairs, civil affairs, and domestic affairs, which deal with marriages and housing. The ecclesiastical administration deals with a divine worship that varies from one society to another. Within those

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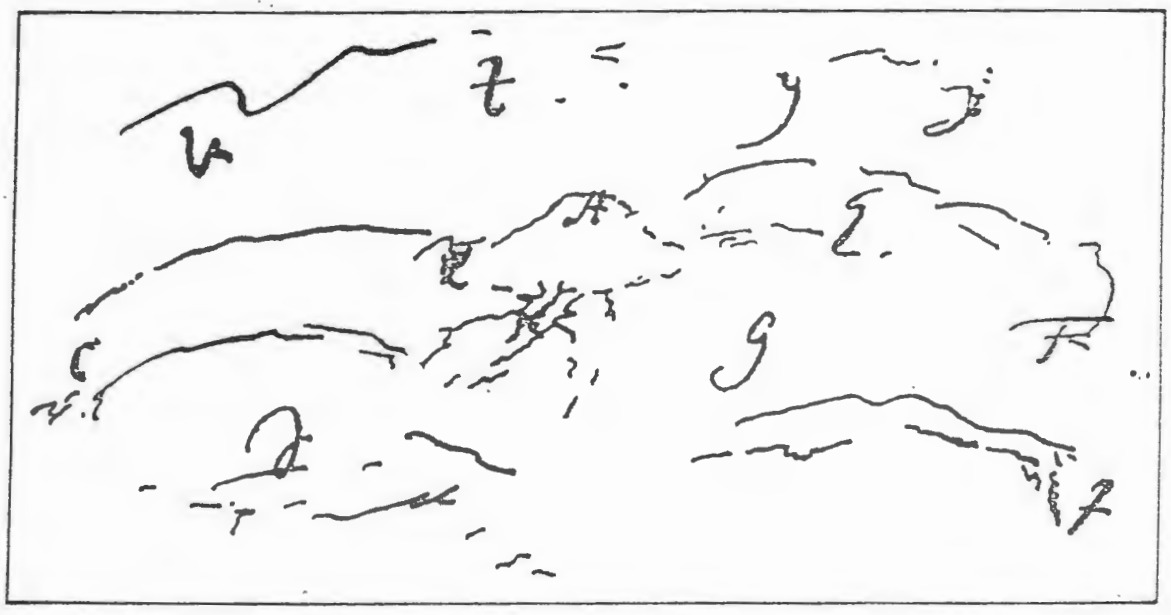
[7]See Swedenborg (1899) [references are made to the paragraphs and not to the pages], 103-15 and Swedenborg (1909), pp. 16-22.

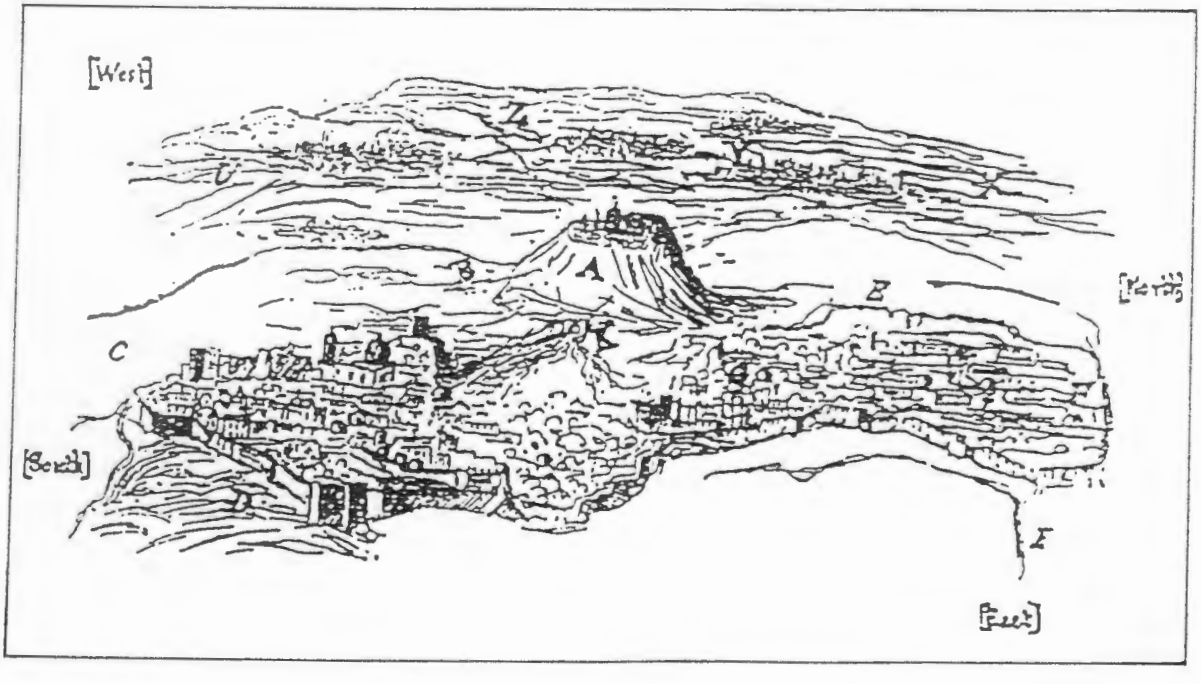
[8]See Swedenborg (1899), 177-90.

communities there is preaching as well as an ongoing discussion on various religious questions.[9]

As it is usually believed, there is no notion of space and time in *mundus intelligibilis*. Angels simply did not know what Swedenborg was talking about when he used spatial or temporal terms. He explains this by portraying the spiritual world as constantly facing Divine Being that appears in the form of the sun. Unlike our natural sun, however, this appearance is stationary and always present. Our conception of time is based on the fact that the sun apparently revolves around the earth at regular intervals and thus causes the unequivocal shifts of light and darkness which we call days and years. In heaven, variations of intensity in the sun-like divine appearance depend on the intensity of the state of love and wisdom of individual spiritual beings. When the quality of their love and wisdom is at its fullest they experience the sun as much brighter than the light on earth. If their interest involves other mental states, it becomes cloudy or something like a twilight sun. These alterations vary amongst individuals as well as amongst societies in heaven. They are necessary because the constant state of love and wisdom towards the Divine Being would gradually lose its value as much as the enjoyment of pleasures without variety. It also enables spirits to render their perception and sense of good more exquisite. Therefore, changes of the

[9]Ibid., 213-27.

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mental states illustrated through the changes of the appearances of Divine Being in the spiritual world alter our conceptions of space and time. The natural man may suppose he would have no thoughts, if the ideas of time, space and material things, were taken away, for upon these ideas is founded all man's thought. But spiritual comprehension shows that the thoughts are limited and confined as long as they partake of time, space and matter. All approximations and changes of place in heaven depend on similarities and dissimilarities of the interior state of individuals or societies. For example, one person becomes present to another provided only that he or she intensely desires its presence. Distances between interlocutors may be lengthened or shortened according to desire. The contact resumes and lasts as long as they agree; as soon as they disagree, they disappear.[10]

Swedenborg explains the relation between the two worlds in terms of "correspondence". The natural world exists and subsists from the spiritual, like an effect exists from its efficient cause. Therefore, the spiritual world is prior to the natural world in the sense that it gave it existence and continues to have perpetual impact upon it. This impact may be known through knowledge of correspondence. Different orders of heaven are also co-related by correspondence. The hierarchical order finally terminates in nature and the corporal part of man, on which it rests as its base. The first people that inhabited the natural world were open to the pure correspondence. But, gradually the love of self and the world prevailed more and more

[10]Ibid., 154-9; 162-9; 191-9.

in the natural world and detached humankind from the First Esse of Life. Consequently the knowledge of correspondence was less and less accessible. Swedenborg has a Platonic vision of the history of humankind that regresses from the golden age, through the silver and copper age to the present iron age. The iron age is at length corporal and the knowledge of correspondence is altogether lost.[11]

Man is the sole being that is a part of both spiritual and natural world. His interiority, understanding, and will make up his spiritual part. His body, including its senses and actions, belongs to the natural world and is therefore called a correspondent. Internal operations display themselves in a natural form as correspondents. The affections of the mind may be seen from the human face; ideas of understanding reveal themselves in speech; determination of the will can be grasped from the gestures of the body. Nature has been created only to clothe the spiritual and to present it in a corresponding form. Man differs substantially from animals by possessing the rational faculty. Although this capacity is from the Divine it enables one to stray from the knowledge of correspondence and reason about the world. The perversion of Divine inheritance in man that took place throughout history, is favoured by the rational faculty. Being without the rational capacity, animals cannot destroy what is in them from the spiritual world. Therefore, knowledge is implanted in them from their very birth. By contrast, man must be born entirely ignorant and afterwards be led back by Divine means into the order of heaven. Since man partakes in both worlds, he is a

[11]Ibid., 103-15.

medium of conjunction. But even without the mediation of man, Divine influx continues to flow into the world. This influence concerns natural things in man, but not his rational capacities.[12]

The nature of the conjunctions of man with *mundus intelligibilis* takes many forms. Spirits are conjoined with the interior of man's mind, while the natural or external man learns about the correspondence from the Bible. Swedenborg claims that there would be no spiritual mental life, and therefore no life whatsoever, without the conjunction with entities from the world of spirits. Good and evil spirits enter man's memory and thence all his thought and experience becomes as their own. They do not realize that they are with man and cannot see him because things of our world are not objects of their sight. This is especially important because there are some evil spirits that would do anything to destroy man. Things being as they are, spirits think that they act for themselves and act in their own interest.[13]

Man possesses freedom because he is in equilibrium between good and evil influences. Good spirits are adjoined to man by the Divine Being, while evil spirits are invited by man himself. Spiritual entities that "participate" in one's mental life change according to one's changes of affections. Spiritual influences are limited to affections of good or evil. They are not capable of altering human thought which may stay

[12]Ibid., 87-102.

[13]Ibid., 292.

largely unaffected. Therefore, we can talk of man's power of choice and freedom in this respect. Man knows how to delineate between good and evil from the instructions given in the Bible. So, one becomes exposed to all sorts of spiritual influences according to one's own inclinations. Moral life settles between good and bad affections due to association with various spiritual entities. In this process the independent thinking capacity has the positive power of decision-making. The variations between good and evil affections, and tension between different mental capacities, affections and thought, help perfection of man's moral perceptions and actions, and ultimately guide human beings to the divine order.[14]

The language of spiritual beings is much more perfected than our natural language. It is capable of condensing thousands of bits of information within a single sentence. On exceptional occasions some individuals are granted the opportunity to converse with spirits and angels. Spirits enter man's memory and speak his natural language. They can be heard sonorously but only by the individual whom they are addressing.[15] Swedenborg was one of those fortunate ones to experience this and tell us the story. This story reached Kant through some more mundane workings of Swedenborg. Kant's interest in Swedenborg's writings was instigated by the reports of his supernormal powers that allegedly had empirical consequences. This will be the subject of our interest in the next section.

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[14]Ibid., 293-6.

[15]Ibid., 234-45.

2 Kant's letter to Charlotte von Knoblauch

In the late 1750s the name of Swedenborg became widely known in many European salons. This must have been the case especially in the Baltic region closely tied by trading relations where both Kant and Swedenborg lived. Stories and rumours about Swedenborg's extraordinary gifts were based on his alleged visions that resulted in accurate predictions concerning daily events and missing objects. They seem to be partly responsible for later wider attention given to Swedenborg's publications. It is in this context that Kant becomes involved, on a request of a certain young lady called Charlotte von Knoblauch. Although Miss von Knoblauch's letter was not preserved, it seems clear from Kant's reply that she drew his attention to the stories and asked about his opinion on the matter.[16]

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[16]See, "Letter dated 10. 8. 1763. by I. Kant to Miss Charlotte von Knoblauch" in *Dreams*, pp. 149-54. There has been quite a bit of controversy over the dating of this letter. The letter was first published by Kant's biographer L. E. Borowski and dated 10. 8. 1758. I. F. Taffel looked for the evidence concerning the events that Kant described in his letter and established that they could have only occurred between 1759-1762. Since the original script was lost, he concluded that the adequate year when the letter was written, is 1768 (and thus, the mistake was in substituting number 6 for 5). This would in turn mean that Kant's view about Swedenborg changed towards a more positive understanding after *Dreams* and in fact led Taffel to the further conclusion that Kant was a concealed Swedenborgian throughout his life. However, Taffel's theory was destroyed by K. Fischer who adduced documentary evidence that Charlotte von Knoblauch got married in July 1764. It seems now to be commonly acknowledged that the letter dates from 1763. See, *Dreams*, Appendix, pp. 177-82.

Kant's letter is the result of a thorough investigation in compliance "with an order from a lady whom [he] consider[s] an ornament of her sex". From the outset Kant tried to make his position quite clear, as well as his addressee's discursive space. "The contents of the report which I am about to write is of a different kind from those graceful tales which usually penetrate into the chambers of beautiful ladies." And concerning his reservations about miracle-seeking, he says, "I have always tended to make [tales about apparitions and visions concerning the world of spirits] conform to the rules of sound reason, and I have always been inclined to regard such tales quite sceptically." Having stated the necessary precautions and the difficulties immediately arising from any sort of ghost-stories, Kant says that this approach was bound to change in light of the reports of "Mr. Swedenborg's talents." He goes on to inform her of the steps he took in order to investigate the stories. A Danish officer, a former student of Kant's, and a "highly educated English gentleman" were asked to collect more information on their respective visits to Stockholm. The former spoke to some of the witnesses at one of the instances, and received a full confirmation concerning the story. He also suggested to Kant that he should write directly to Swedenborg, which Kant did. The latter managed to meet Swedenborg at his house and was astonished by his interview. Swedenborg promised that Kant would find a reply to his letter, paragraph by paragraph, in his new book soon to be published in London.

We also find out that the available evidence of reports about Swedenborg stunned Kant. His reaction may also be due to the fact that some of the witnesses held high positions in the social hierarchy. "One can hardly assume that one ambassador relates

to another ambassador a story meant for publication, concerning the Queen of Sweden,..., without telling the truth, especially as he had the opportunity of being present at the incident with some other distinguished company." A detailed account of two stories follows, of which the second one "as a proof... eliminate[s] the last possibility of doubt." Briefly, it runs as follows: Swedenborg landed in Göteborg on his return from England at 4 P.M. one day towards the end of September 1756;[17] at the dinner party that evening he suddenly became pale and upset; towards 6 P.M., after few intervals of absence, he announced that the fire had just broken out in Stockholm and described in detail which parts of town had been affected; at 8 P.M., following another brief absence, he declared joyfully to the guests that the fire had been halted "three gates from his own house." The official information reached Göteborg only two days later, due to the nature of transportation in eighteenth century Sweden. It fully fitted Swedenborg's description in terms of time and areas affected by the fire.

Kant expressed regrets for not being able to conduct an interview with Swedenborg himself. But, he arranged for Swedenborg's new publication to reach him as soon as it leaves the press. In the concluding notes, Kant stressed that he would not reach the final verdict on the matter before examining Swedenborg's writings. Therefore, he would continue to reply to Miss von Knoblauch's request and keep her informed. No

[17]Kant recounts this story in *Dreams* and gives the year 1759. Broad has checked the archives in Göteborg and Stockholm and maintains that the correct dating of the fire is 19th July 1759. See, Broad, p. 151.

further correspondence between these two parties is known to us. One may speculate that it ceased when Miss von Knoblauch got married in July 1764. Be that as it may, Kant carried on dealing with the problem of the exalted knowledge for the biggest part of his life. After a thorough study of Swedenborg's *Arcana Coelestia*, he published *Dreams of a Spiritseer* in 1766. However, the outcome of his investigation was by no means unambiguous. His epistemological concerns were only pacified in the *First Critique*, where the domain of the supersensible was finally and clearly situated. But at the same time his changing strategies devised to deal with such phenomena as a social concern only seem to have reached the final verdict towards the end of the century.

3 Multiple Voices in *Dreams of a Spiritseer*

When Kant finally disclosed the results of his three-year investigation, he entitled it, *Dreams of a Spiritseer, explained by the dreams of metaphysics*. As it becomes apparent late in the treatise, the spiritseer is Swedenborg. For a philosopher to treat the teachings of a visionary seemed perhaps no less strange than it does today. His approach to this topic was no less surprising. Is the title to be understood as suggesting that metaphysics is able to produce dreams of some sort? Are those dreams in some ways compatible with dreams of a medium or a visionary? And therefore, are they capable of explaining (away), directly or indirectly, supernormal phenomena? The

answer to the first two questions seems to be affirmative and the answer to the last negative. The problem, however, arises with the question of the cause and the nature of those dreams, as well as their implications for the whole metaphysical enterprise. Kant's stand here, although painstakingly balanced, is nevertheless an ambiguous one.

Throughout the treatise Kant feels obliged to give justifications for his engagement with a topic which is not always easily received in academic circles. After all, he says, "I am in a good company".[18] There were many other prominent scholars who tried to prescribe adequate means of orientation in the world of shadows. Amongst other reasons, he cites the "heavy pressure from known and unknown friends" and the fact that the twelve quarto volumes of *Arcana Coelestia* "had been purchased, and what is worse, had been read; all this trouble ought not to be lost." Kant is very much aware that he is dealing with a slippery matter that could easily turn into an object of mockery.[19] In his explicit fear of being ridiculed, he adopts a Rousseauistic style, playful and witty. His criticism of Swedenborg has a surprisingly sharp edge. He does not spare Swedenborg remarks such as "a candidate for a nearest asylum," or "the worst of all dreamers," or qualifying his writings as "devoid of any meaning". A publication with such an approach presented a novel and valiant venture in Germany. Although German philosophers at the time had some interest in occult theories,[20] none

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[18]See, *Dreams*, p. 77.

[19]Ibid., p. 55.

[20]Wolff, for example, corresponded with Swedenborg. Oetinger, a Würtemberg pastor, published a book on Swedenborg in 1765 which was reviewed by Lambert, a Berlin Academy member.

of them went to such stylistic extremes. This style cannot be traced in any of Kant's previous or later writings, which are characterized by an exemplary humility, strictness, and rigour.

For all its playfulness and irony, this strategy was not enough to distance Kant from possible accusations of choosing an unsuitable subject-matter for academic discourse or even of appropriating instances of occult discourse. So, in addition, throughout the treatise he shifts from one set of presuppositions to another, from one mode of explanation to another, without unambiguously being in favour of any one of them. This is the case, I would argue, more because Kant could not settle the issue with himself than because he wanted to simply conceal his true standing in public. It is as if he had to speak in different **voices** and use different **tones** of discourse in order to do justice to his own undecidedness. Such an approach enabled him to explore the implications of various often contradictory suppositions. It was made possible by the use of interjections like, "how can I blame the reader who considers..."[21] or "in the past, I regarded the common reason of man simply from the standpoint of my own; now, I shall place myself into the mind of a stranger."[22] Furthermore, the "excursions to occult philosophy" are marked by precautions, such as, "begging the readers indulgence, I shall now dare to introduce at this stage an experiment of [a systematic

[21]See, *Dreams*, p. 66

[22]Ibid., p. 67.

description of the world of spirits] which though somewhat outside my own field, might give occasion to some not too unpleasant conjectures."[23]

The treatise is composed of two parts, theoretical and historical. Kant reverses the usual order of starting with an empirical exposition and proceeding to theoretical considerations. Instead he begins with a dogmatic part which presents his own theory of spirits and saves the analysis of Swedenborg's teaching for the second part. In this way the semblances between the two accounts may seem less embarrassing and, as he states, might give the reader an opportunity to judge his own theory on its own merits. By doing this, Kant says, he may be accused of a trickery, so common in treatments of a topic of this sort, that consists in skilfully guiding reason through various data so that one may reach conclusions established beforehand. Following this procedure, many have offered instances of *a posteriori* knowledge under the pretensions of *a priori* method. However, since Kant thoroughly revealed the operations in this kind of procedure, and "gave the game away" in the second part, he pleads with the reader not to believe him capable of such deceit.[24]

Discontinuity between the two parts of the treatise may be illustrated by some of their respective conclusions. In the first part, Kant concludes that in opposition to the objects in nature which are accessible through our sense perceptions, spiritual beings

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[23]Ibid., p. 49.

[24]Ibid., pp. 80-1.

can never be known but only assumed. Since, in this respect, no data are available to us in our total experience, "such knowledge can only be completed in a negative sense, by setting the boundaries to our knowledge" in general. Therefore, in what he calls a "pompous" pronouncement, "there may arise in the future many more beliefs on this subject, but no further knowledge."[25] In the second part the distinction between explanations in natural science and those concerning spiritual entities has been played down. The former conjectures do possess the status of hypotheses, since they merely extend the fundamental principles on the basis of empirical explanations of already known phenomena to novel ones. The idea of the force of attraction in matter would be equally susceptible to ridicule had Newton not taken the pains to establish it on the evidence of experience and with the help of mathematical calculations. The latter do not possess the status of proper hypothesis but still satisfy the criterion of thinkability. Although the grounds of reason may be irrelevant and experience must be taken as a final arbitrator, the objects of knowledge are not solely restricted to the objects of nature. Hence, a tentative prediction that is in direct collision with the above conclusion, "we must simply wait until future generations obtain perhaps new experience and new concepts of our occult powers which lie hidden in our thinking selves and thus manage to throw more light on the above problem."[26] However, Kant goes on to argue that occult knowledge may not be of such importance as it is usually thought. From the practical point of view, it is quite useless and unnecessary: a moral life can be assured even without any hopes in the afterlife. Since occult conjunctions

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[25]Ibid., p. 70.

[26]Ibid., p. 90.

are capable of much deceit it may be more advisable to ignore or at least suspend judgement about them altogether.

Some of the apparent "lapses" and contradictions between various statements in the treatise, as well as its lack of elaborate structure, may also be due to the fact that Kant had to send his book to the publisher page by page for proofreading as it was written. Whatever the case may be, the book stirred much controversy in the public. Even his friends were not able to identify Kant's position behind multiple voices, unexpected turns, and repeated excuses for what he said, all wrapped in considerable irony. Subsequent commentators have had to face the same problem. For that reason, *Dreams* has been described as a text almost impossible to summarize.

I would like to sketch three extremely different and seemingly incompatible approaches out of a variety of possible interpretations of this text. One characterizes *Dreams* as an exemplary case of a struggle of reason against obscurantism. Kant's main aim was to cut off all the grounds of supernormal experiences and establish reason as the final arbitrator. He presents supernormal experiences as distortions of the "normal" functioning of the faculties that result in hallucinations. As such they should be regarded as a product of mental illness. Francis Courtes, the French translator of *Dreams*, for example, goes as far as calling this text "a classic of rationalism". According to him, the comparison of the "dreamers of senses", that is

spirit-seers with the "dreamers of reason", namely Leibnizean metaphysicians, has been introduced only to highlight the differences between the two.[27]

Contrary to such a claim, there have been some, mostly Swedenborgeans, who would like to stress the appropriation of Swedenborg's ideas in *Dreams*. Kant's sharp attacks on Swedenborg and his resistance towards acknowledging any Swedenborgian influence are due to his fear of the reaction of the public.[28] More importantly, this influence leaves a significant mark on Kant's later writings, including critical ones. It may be illustrated, for example, by the use of Swedenborg's concepts of *mundus sensus* and *mundus intelligibilis* in his *Inaugural Dissertation*. Indeed some indications have been given by the early commentators, Vaihinger and Erdmann that this Swedenborgian distinction however loosely connected still features in all three *Critiques*.[29] It was also suggested that Swedenborg's alleged supernormal gifts although explicitly denied, were still hypostatized under the name of *intellectual intuition*. Some support for the hypothesis of continuation of interest in Swedenborg have been found in recently discovered notes taken by students that attended Kant's lectures in Rational Psychology from the 1770s. They bear extensive references to Swedenborg and do not contain the critical tone apparent in *Dreams*.

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[27]See David-Menard, p. 74.

[28]See Goerwitz's commentaries on his translation of *Dreams* and Taffel's *Supplement to Kant's biography* (Stutgart: 1845).

[29]Erdmann proposes such a reading of Kant. Vaihinger points at his conclusions and refers to the similar views of Laas. See, *Commentar zu Kants Kritik*, pp. 512-3 and pp. 344-6.

Finally, the most common approach amongst Kantian commentators has been to ignore Kant's treatment of Swedenborg, and to emphasize his discontent with contemporary metaphysics and his suggestions for the direction in which it could be changed.[30] It is not just that spirit-seers inevitably present dreams as a tangible "other reality", but it is also metaphysicians who suffer from the illness of dreaming about the "other reality," notwithstanding the lack of foundations for it. In both cases the building material is equally lacking. Therefore, a limit should be set to our knowledge-claims, which will in turn reform metaphysics and restrain us from fruitless and bottomless projects. Kant, himself, repeatedly refers to this solution throughout the treatise and towards the end he presents it as the major point he wanted to make. After stating that he is tired of copying the worst of all dreamers, and in yet another one of his reversals, he says, "I **did** have another purpose which seemed to me of greater importance than the one which I pretended to have, and it looks though I did achieve it." He goes on to argue that all problems must be sufficiently determinate for human knowledge and that by tracing the limits of human understanding metaphysics becomes a true science.[31]

I have singled out these three readings of the text not only to illustrate to what extent it is open to incompatible interpretations but also to claim that Kant's intentions and shifts of emphasis can be traced in all three of them, in all their contradictions. None

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[30]E Cassirer, for example, gives a fairly brief, but lucid account that concentrates on the ideas of the reformation of metaphysics as the main objective of *Dreams* in *Kant's Life and Thought*.

[31]See, *Dreams*, p. 91.

of these readings of *Dreams* in isolation seems to be sufficient to do justice to the text and ultimately to exclude alternative readings. It is only in their conjunctions or parallel threads, I would suggest, that we may account for Kant's explicit undecidedness. If we are to reach some sort of comprehensive reading of *Dreams* it will be only by following the manifest shifts from one voice to another towards their possible or necessary conclusions. In the rest of this chapter, I will first look at Kant's analysis of the concept of "spirit" and his speculations about the world of spirits that bear the mark of Swedenborg's visions. Then, I will examine his theory of hallucination which renders spirit-seer's visions as products of mental illness. Finally, I will analyze Kant's comparison of visionaries and metaphysicians and his indicated project for the reformation of metaphysics In the following chapter, I will examine whether any marks of Swedenborg's teaching appear in the exposition of the *First Critique*, as well as continuities and discontinuities between the project of the reformation of metaphysics sketched in *Dreams* and the conception of Critical Philosophy.

4 The Concept of "Spirit"

Kant opens the theoretical discussion in *Dreams* with an analysis of the meaning of the concept of "spirit". He argues that even if we doubt or deny the existence of spirits, we can still use the word intelligibly. The only way to examine this often ill-

understood concept is by confronting the ordinary use of the word with all sorts of cases encountered in experience. Since the observable instances of spirits that are testable are constrained by limitations, the only available way to account for them is by contrasting them with the notion of matter. In other words, we conceive of spiritual substance *via negativa*, by attributing to it properties opposite to material substance.

The version of the theory of matter that Kant offers in *Dreams* assumes that any finite body consists of a number of simple material substances. Each of these is located at a particular point at a particular time. Saying that material substances are impenetrable amounts to saying that no two material substances may be located at the same place at the same time. This is because the most basic constituents of matter possess repulsive force. It is this property of material simples that enables us to define them as the centre of the field of such force. As the distance from the centre increases, from a certain point, the intensity of the symmetrically effective force may be reduced to zero. Somewhat like Leibniz's monads, the material simples are characterized by an active force field rather than extension. If we conceive of simple material substances on a model of extension, a single such entity would occupy a volume even if nothing but it existed. The model of repulsion, by contrast, would be meaningless unless there are at least two elementary substances to repel each other. So, within a macroscopic body consisting of a finite number of elementary substances, according to the model

of extension an element can only be conceived as a **limit in** and not as **part of** the body. The latter explanation is only available on the model of repulsion.[32]

The theory of matter, however, provides us with no insight into the internal features of the bodies of macroscopic size, and the inaccessibility certainly increases in the case of elementary material substances that constitute them. All that we know concerns their external relations. As far as we reason beyond empirical instances there is neither anything to support the view that such substances are rational nor anything univocally suggesting that they are not rational.

If we now turn *via negativa* to spiritual substance, we find in agreement with classical belief that spirits show no resistance to the entry into a portion of space already occupied by elementary material substance and that they, as opposed to matter, are indivisible. From the first attribute arises the difficulty of conceptualizing spirits in conformity with empirical representation. The concept of spirit requires a representational capacity of visualizing a substance in presumably the space already filled with material substance. Our representations obtained from experience offer no material that would enable us to conceive of such spatial overlapping *in concreto*. We can formulate this problem in different terms. From empirical instances we can infer about the properties of elementary material substances, their repulsive force and

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[32]My account of Kant's theory of matter relies on Broad's elaboration of it in ***Religion, Philosophy and Psychical Research***, pp. 128-9.

external dependency on other similar simples. Supposedly, and by definition, spiritual substances do not possess such force active properties. Therefore, the question of spiritual and material simples occupying the same portion of space is strictly speaking meaningless. There are no available analogies derived from empirical evidence that would be able to support an explanation of such a state of affairs. Another difficulty arises from the apparent indivisibility of spiritual substance as opposed to divisibility of matter. If rational being necessarily consists of a simple unit, how can we conceive its distribution over a whole of diverse and interconnected parts of the body? Even if spiritual substance has an impact on matter it is inherently impossible to explain its operations in terms of causal relations.

Despite all these difficulties, as a matter of personal conviction, Kant is inclined to affirm the existence of immaterial beings in the universe and to regard his soul as such a substance. The reason for this, he says, is quite obscure and will probably always remain so. At the end, all rests on the assumption which if not necessary is at least most plausible: "every substance, even the simplest element of matter, must possess some inner energy as the very condition of its outer activity."[33] The essential characteristic of matter is its capacity to occupy a space through its necessary force. In order for this capacity to take its effect, there needs to be at least one other similar force field that acts as a counter-force. Therefore we may conclude that the state of all material things is one of necessity and external dependency. On the other hand, it

[33]See, *Dreams*, pp. 42-3.

seems evident that life implies some inner capacity of self-determination not only in the case of human beings but also in the animal kingdom. Only a self-activating substance can account for the free will, the ability to determine, conduct, and change ourselves. Kant suggests the further possible implications of such commitment,

> According to the above principles, the soul could then have knowledge of the state of the universe by means of its inner determinations through an intuition whereby the universe becomes the cause and the inner determinations its effects.[34]

Thus, if we follow the spirit/matter distinction along the lines determined above, we can accordingly assume the capacity of the human soul to provide information about the state of affairs of the noumenal realm. It is possible on the of a special kind of intuition that by-passes the external relations of material objects and offers direct insight into the causes beyond the material realm. As far as humanity is constituted by two utterly different substances, one externally dependent and the other internally self-activating, it has a potential to acquire knowledge within both realms. However, Kant considers himself incapable of explaining the properties of the inner energy required for the outer activity of simple material particles. Furthermore, he has no answer as to what causes the spirit to link with the body or what causes the dissolution of such a union.

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[34]*Dreams*, p. 43.

Some of the problems that seem so puzzling in this first chapter of *Dreams* become the main motifs in the exposition of the *First Critique*. It is the soul, in the "Preface to Second Edition," that figures as the prime example of the plausibility of transcendental philosophy. Kant takes it to be unproblematic to say that the human soul is free, by virtue of free will, and not free, since it is a subject to natural necessity in its union with the body. If we proceed by precritical reasoning we are bound to take the soul in one and the same sense, namely as a thing in itself which inevitably leads to contradiction. The critical distinction between two modes of representation, sensible and intellectual, enables us to take an object in a twofold sense, as appearance and thing in itself. As far as we take the soul as appearance, we can account for it being not free. This is how far our knowledge through the speculative use of reason necessarily stretches. Taken as a thing in itself, soul as free can only be thought of and never known as such. There are no representational constraints that would prevent us from thinking of its freedom. Since morality necessarily presupposes freedom and generates the practical principles that use *a priori* data of reason, it has this second avenue of things in themselves as its proper field of enunciation.[35]

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[35]See, *First Critique*, B xxvii-xxix, pp. 27-9.

5 A Fragment of Occult Philosophy

So far we have only analyzed the concept of "spirit" in contrast to the theory of matter and in relation to material entities, elementary and macroscopic. Now we need to examine the relations of immaterial substances in their own right. This account takes us on a "hazardous journey" that more or less recounts Swedenborg's exalted doctrine in philosophical terms. Following the conclusions in the previous section it becomes plain that immaterial substances are able to animate matter even though they do not conform to any laws of mechanics. By contrast they are subject to pneumatic laws, mutual laws of relation and reciprocity. As pre-subsisting entities with self-activating principles we may expect them to form a community of their own which we call *mundus intelligibilis*, or immaterial world. For it seems implausible to imagine that such spiritual entities constituted of a similar nature relate to each other through a medium of a different nature, via material entities. Therefore, all the principles of life in the universe are united into a community of immaterial beings of which some are linked to matter, as in the case of human intelligences and sensitive souls of animals. The relationship between spiritual entities and material bodies must be considered as only contingent, while spirit to spirit relations should be seen as natural and indissoluble.

Following Swedenborg's model, immaterial beings are hierarchically ordered according to their inner determinations. Their community is more perfected considering that it is not conditioned by relations of bodies in space and time. Apart from those differences, the spirit world is not "much more than just an ordinary common-place thing," says Kant. However, it is not quite clear how he comes to this conclusion since his description of the spirit world is much more cautious and less detailed than Swedenborg's. He restrains himself from attributing to spiritual entities sense perception or language, let alone suggesting that they have such attributes as property rights and governing institutions.

The human soul belongs to two different realms simultaneously. As long as it is in communion with the body, it has only sense perceptions. Its link to the spiritual world is limited to pure influences received unconsciously. Once the soul separates from the body it gets a clear and conscious insight into the world of spirits where it always belonged. Likewise, disembodied spirits have no insight into the material world. They have no appropriate organs to orientate themselves in space and time or apprehend physical relations between objects. Nevertheless, since they are of a similar constitution as the human soul, it is reasonable to suppose that they are capable of influencing it. From this arises a difficulty concerning the nature of that influence. How can we conceive of a transmission of representations between spiritual entities that have different perceptual capacities altogether? One mode of representation knows nothing about spatio-temporal limitations and operates solely on self-activating principles. The other is inextricably bound to spatio-temporal ordering of material

objects. Hence, no transmission of fully conscious representations from the world of spirits is possible. In an attempt to give an explanation of the interconnection between the spiritual world and human soul, Kant proposes an experiment which will be the subject of our attention in the next section.

6 Gravitation in the Spiritual World?

At this stage Kant resorts to a strange hypothetical conjunction between Newtonian physics and Swedenborgian occultism. It provides a temporary solution for what was bound to become one of the most pressing problems for the reformation of metaphysics, namely the contradiction between man's moral and physical relations in the earthly life. The starting point is the set of intuitions, supposedly of a common character, of some force that makes us stray from our selfish inclinations and directs us toward those of other rational beings. All of us attach so much importance to other peoples' opinions and seek their approval for our moral decisions. There is always a feeling that our moral judgements should be reconciled with some universal requirements that we are unable to clearly formulate. Consequently, for example, we try to correct judgements of others that are not in conformity with ours on the basis of a shared capacity of moral reasoning. This manifest tendency may account for some inherent feature of human nature that points out its dependence on the world of spirits.

Human behaviour and moral feeling in this respect may be explained by a not fully conscious

> realisation that there exists some dependency of our own judgement on some Universal Mind and also to our attempt at imposing some kind of unity of reason to the whole class of thinking beings.[36]

On the basis of this premise, our internal conflicts can be described in the following way,

> Whenever we relate external objects to our needs we often get the impression of some limitation or bondage; we cannot help feeling that some alien will acts on our behalf or that our personal preferences require a measure of external approval. Some unknown power appears to direct our intentions upon the welfare of others or to make us obey some alien will even when this conflicts with our own selfish inclinations, even when we do so unwillingly. The focal point no longer resides in ourselves with regard to our drives and motives; and the forces which seem to act upon us in this way arise upon the volition of others, external to ourselves.[37]

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[36]*Dreams*, p. 50.

[37]Ibid., p. 50.

The alien force in question is the Universal Will that imposes its rule on our personal will. It acts as a harmonizing factor among the spiritual entities. In this way the moral unity of all thinking beings is established on the sole basis of spiritual laws. This, however, does not mean that we have an insight into the noumenal causes apparent in our moral feeling. All that we can do is to judge its manifestations.

A similar situation arises with respect to Newton's law of gravitation. As we know it, his mathematical calculation provided the demonstration of the relations of forces of attraction between material bodies. His laws yield a system that on the basis of the universal principles is capable of explaining a wide range of physical phenomena, from the motion of astral bodies to the motion of objects on the surface of the earth and supposedly all possible physical states of affairs. Newton, however, took gravity only as a manifestation, a real physical effect, of some universal force, yet unknown. He refrained from speculations about its causes, as he did not want to enter any philosophical disputes. Could we not, in a similar way, asks Kant, suppose that the moral feeling is a real effect of a universal force that originates in the spiritual world? By means of this interaction between the natural and universal and according to the laws of its own structure, the spiritual world would achieve a moral unity of all spiritual beings. Just as material objects occupy a definite position in relation to other objects, according to the laws of motion, embodied spirits have their position in the hierarchy of spirits according to their moral conduct in their respective societies here on earth. The corporal state prevents our true intentions from being adequately executed through actions and consequently from being fully appreciated. As we all

experienced, beneficiary results, for example, may be produced, depending on circumstances, from good or bad intentions. But, whatever the outcome of our moral action, it is our intentions that unavoidably get registered within the community of spirits. The changes of the inner state of one member of the community of spirits telepathically produce changes in the rest of community. Once the human soul separates from the body it takes up the place in the spiritual world that is created for itself through moral life on earth. Only then, in the afterlife, it realises the effects of mutual influences.

Furthermore, although not clearly stated, there seems to be a more specific analogy between Newton's gravitation and Swedenborg's world of spirits that concerns the relation between objects. It appears that Kant wants to suggest that in the spiritual world there are entities with comparatively stronger and weaker capacities. Proportionally to their force and through the medium of telepathic exchange, the "smaller" entities gravitate around the "bigger" ones.

7 *Schwärmerei* as Mental Illness

Having examined the concept of "spirit" and the field of its possible applications, Kant comes to the question which, according to the set of procedures to which he is committed is the crux of the matter. As we have seen so far, in order to be able to have an insight in the spiritual world and its influence upon this world, we need to have an intuition otherwise called "clear" or "immaterial". The epistemological status of any account of the spiritual world and its influence rests on such alleged human capacity. So, he asks, if we are to conceive anything about the human soul in as much as it belongs to an ontic order that is utterly different from the one accessible through experience, are there adequate means for such an endeavour?

Kant first notices that instances of this kind, that is alleged visions, sonar communications, or temporary expropriation of the body as a result of the interaction between two realms, are not common phenomena. As it has already been established, the representation of spirit in itself that the human soul creates through immaterial intuition must be entirely different from the one by which consciousness becomes aware of itself. Now, this would allow us to say that the soul is "one subject which belongs as a member to both visible and invisible world," but not that "the same

person belong[s] to both worlds." This is the case because the representations of a subject as a spirit cannot be remembered by the same subject as a human being and *vice versa*. Kant takes dreams as an example that illustrates best this kind of parallelism. He argues that the dreams which result from a state of deep sleep can never be remembered once we are awake. Consequently, we cannot say anything with certainty about them. However, Kant suspects that they give rise to ideas more distinct and comprehensive than ones in the wakeful state, since our external senses are at rest. By contrast, in the state of ordinary dreams the impressions from the outer sense are not completely adjourned. That is why we partly remember them as a mixture of those impressions and the play of imagination.

Following this analogy, impressions from the spiritual world cannot penetrate into human consciousness. Immaterial intuitions are untranslatable into the mode of representation appropriate for consciousness and must necessarily stay subconscious. In exceptional cases, however, indirect influences from the world of spirits are possible. It is said that the end products of its influence "are not the actual spiritual concepts but merely their symbols". It is not clear what Kant means by "spiritual concepts." It seems that we cannot expect anything like clear or unmediated ideas since the language that spiritual beings use is utterly different. In other words, the concepts that convey ideas about the spiritual reality would be meaningless in our ordinary language because they are taken out of the original context in which their meaning is produced. Rather it is through the laws of associations of ideas that the whole set of imagery is created which resembles analogous representations of senses.

Thus, the communication from one realm to another must of necessity be reduced to a symbolic exchange. It is the impressions and not ready-made concepts that get transcribed into our ordinary language. Being of a different origin than human experience, they cannot but be assimilated into the ordinary language but only through the operations of imagination. How exactly and to which kind of imagery of imagination the spiritual impressions are co-related, we are unable to say.

As for the concepts used on such occasions, we find some analogies in ordinary language. We resort to a similar strategy when we seek concrete expression of the "higher concepts of reason", the nearest equivalents to the spiritual concepts. Poets personify the representations of God, by giving Him/Her attributes such as anger, jealousy, and charity; philosophers illustrate Its eternity through the idea of apparent infinity of time; geometricians, using analogy, represent time by a straight line. Using analogies we render incomprehensible ideas into comprehensible ones by the virtue of their conformity with empirical instances. In a similar manner, "the order and beauty of the immaterial world is projected into fantasies which would normally in our ordinary life appeal to our senses".[38]

As already observed, the penetration of spiritual influences into the representational system of an individual is a rare phenomenon. For this to happen the person needs to

[38] *Dreams*, p. 57.

have exceptionally sensitive organs, allegedly a part of the brain designed especially for this function. Once the images of imagination get sufficiently tuned in with the inner state of the soul, a person may experience the presence of spiritual beings as if they were perceived through bodily senses. The end result thus does not amount to more than hallucinatory sense material. Furthermore, for somebody to have such extrasensory perceptions his or her state of nervous system must necessarily be in disequilibrium. Sensitivity of this kind impairs the rational capacity and indicates the presence of mental illness.

Two years prior to the publication of *Dreams* Kant published the *Essay On The Diseases Of The Mind*[39] in which a similar explanation of this phenomenon had been given in some detail. It was written several months after Kant's correspondence with Charlotte von Knoblauch and it may be understood as his first reaction to Swedenborg's writings and his first public discussion on the problem of visionary knowledge, that is *Schwärmerei*. Although Swedenborg's name is not mentioned, a description of persons with exalted and imaginary visions unambiguously leads to the spiritseer. In this essay Kant attempts to explain mental illnesses throughout the wide range of their manifestations, as incapacities of the mind, on one hand, and disturbances of the mind, on the other. The second category groups mental disturbances according to their connections with the disorders of the faculties of mind. The malfunctioning may affect the concepts of experience, the capacity of judging

[39]See, "Extract from the Essay on the Diseases of the Mind" in *Dreams*, pp. 162-8.

those concepts, and the whole faculty of reason concerning judgements. Corresponding to these three types of disturbances of mind, we have three types of mental illnesses, respectively: neurosis, psychosis and insanity. Following this categorization we find spiritseers among the neurotics.

Kant stresses that it is the creative capacity of imagination which is responsible for producing the appearance of sense impressions with no external stimuli. The best illustration of its capacity is the state of sleep when imagination is activated to its full, due to no disturbance of "genuine" impressions. Thus, dream experiences may appear as real and vivid as the facts of experience. In a wakeful state hallucinations may produce the same effects. Although a greater number of individuals may be exposed to them only a less significant number becomes deluded about their status, that is takes hallucination for real sense perceptions. And it seems that in those individuals the impact of hallucinations produces such a deep and lasting impression that no arguments of reason can change this belief. This is not to say that the rational faculty is affected in any way, for they may come with subtle judgements and explanation of their imaginary visions. The state of neurosis is thus found in persons that suffer from this kind of distortion of the concept of experience.

Among a wide diversity of persons who suffer from neurosis, hypochondriacs, persons with disturbed memory, and so on, the most socially damaging are the ones that are followed by other people with a fanatical pursuit. It is in this category of fanatics that

we find visionaries and mystic dreamers. By their sincere and unshakeable conviction, and at times, a talent for leadership, they are capable of obtaining a cult following and mobilising masses for dubious social projects. Kant gives the following warning,

> The human race knows no hallucination which could prove more dangerous! When the message of the dreamer is new, when he has talent, and when the masses are inclined to swallow the yeast of his garbles with religious fervour, the entire country may be seized by epileptic fits.[40]

In addition to the psychological explanation of occult hallucinations, in *Dreams* Kant offers a physiological one. It is based on an examination of the perceptual apparatus. He tries to explain how a person can project quasi-sensory contents which are not evoked by a physical stimulus impinging on his or her sense organs. This attempt relies on a theory of *focus imaginarius* that draws from Huygens in combination with the Cartesian theory of animal spirits. The hypothesis seems to run as follows. There is a subtle fluid element, animal, or vital spirit that fills the nervous tissues of the brain. All representations set in motion those fluids in a manner that is correlated with the impressions of the senses. A particular sensory image is produced when, for example in the case of sight, the light rays directed from an external object intersect. This point of vision is called *focus imaginarius*. In a normal case, when the whole perceptual apparatus is functioning properly, *focus imaginarius* of sense perceptions

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[40]*Dreams*, p. 166. Hamann, proofreader of the *First Critique*, probably on the account of these remarks of Kant's, calls Swedenborg's visions, a "transcendental epilepsy". See, Butts, p. 71.

is outside the brain. However, in cases of derangement *focus imaginarius* is within the brain. Therefore, such a person is unable to distinguish between the products of his or her own imagination and real perceptions. Kant points to a fairly common delusion that can happen in the morning in the state when we are half asleep and half awake, at the stage when we switch from internal representations to external ones. In this state, a face-like or animal-like shape may occur to us on a curtain or wallpaper. Nevertheless, we are able to force our attention upon something else, dissolve the illusion by will and change the mode of representation. In the case of mental derangement, no amount of willpower can control the *focus.* For a person that suffers from such perceptual shortcomings, a particular educational background is needed to become a spiritseer. It is the prejudices of our upbringing that supply the material for the ghost stories and explain their common character.

In *Essay On The Diseases Of The Mind*, Kant does not discuss the alleged causes of occult hallucinations. However, the arguments that render *Schwärmerei* as mental illness in *Dreams* and in the *Essay* run along similar lines and seem to complement each other. Even if we attach real impact of noumenal causes to *Schwärmer's* visions, as Kant does, they can never be meaningfully represented in our spoken languages. Our system of representations is so endowed with and bound to sense impressions that even imagination and exposition of the more abstract concepts of reason cannot escape it. Consequently, the transference of this sort is incapable of adequate transcription. It becomes distorted and clothed in familiar representations of previous experiences. The end-product does not offer any insight into the state and relations of the world of

spirits. And it is not just that *Schwärmer's* visions are useless in terms of the acquisition of knowledge, having epistemological status equal to dreams and hallucinations. They can be damaging for the society at large as much as for the individual. In other words, the pathology of such phenomena does not only affect the individuals that are physically and mentally unbalanced, but it can bring whole countries into some sort of state that is similar to mental illness.

Towards the end of the Third Chapter of *Dreams*, Kant explores another possible solution to the problem of *Schwärmerei*. He argues that there would be three advantages for one to seek a conclusion about this phenomenon without requiring the supernormal explanation. First, one would be able to arrive at some definite conclusion without having to bother to investigate dubious cases. Second, he or she would be able to reach a greater degree of agreement due to an appeal to common experience. Third, there may be an "additional risk of being ridiculed which, justifiable or not, may prove to be the strongest weapon of all in arresting our idle curiosity in the process of similar investigations."[41] Considering this, Kant would not blame anybody who regarded spiritseers as candidates for a mental hospital. If in the past society found it necessary to burn at the stake some of the seers, today it would be more appropriate to apply purgatives. However, considering the criteria in question here, it seems that Kant offered this conclusion only to the particular type of addressees. The first and the last advantage stated here, may hardly be sufficient for

[41] *Dreams*, p. 66.

a serious search for knowledge or satisfy academic standards. In the concluding chapter of the first part of the treatise Kant says that the reader must be free to judge for him/herself. But he tells us that he is committed to an attitude of **seriousness** and **indecision** whenever he hears the ghost stories stemming from the views expressed in the Second Chapter.[42] This statement alone may raise some doubts about how much weight we must put in his conclusions so far. It is not quite clear in what way the position that *Schwarmerei's* visions are products of neurosis "not as to the cause of an alleged community of spirits but as the natural consequence of the connections with the same", amounts to undecidedness. Kant, on the one hand, stresses on more than one occasion that visions of this sort have their cause in the noumenal realm.[43] On the other hand, he gives various explanations of why such visions have no means of meaningful translation, hence, no epistemological value and are, moreover, damaging for the individual and society. Judging ghost stories from his stance in the Second Chapter, his position seems one of commitment and apparent unambiguity.

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[42]Ibid., p. 70.

[43]See, for example,

> The inequality of spiritual representations and those belonging to the corporal nature of man must not be regarded, however, as an obstacle of such magnitude as to completely prevent any possibility of occasional influences from the spirit world upon the human consciousness even in this life. p. 55. And

> I have always maintained a certain reserve and a sense of wonder towards them, doubting each story individually, but attributing some truthfulness to all of them put together. p. 70.

8 Dreamers of Senses and of Reason

In the Third Chapter of the first part of *Dreams*, Kant's investigation of ghost stories, *Schwärmerei*, and the spiritual world takes another unexpected turn. Once we finally come to dreams and dreamers in question we find out that *Schwärmers* are not the only type of people who live in a delusion about knowledge of the alleged other world. Metaphysicians too are no less susceptible to similar constructions. Although the dreams in those two cases are of different sorts, the preventive measures against such practices may be devised along the same strategy. Kant directly refers only to Wolff and Crusius as dreamers amongst metaphysicians. But following his characterization of methods applied by metaphysics and his dissatisfaction with them, one seems to be able to implicate not only Leibniz and Leibnizians, but implicitly a good part if not the whole metaphysical tradition into one branch of dreamers. We will consider the cure offered in *Dreams* for the sickness of dream-castle builders in the following chapter. Here, I will limit myself to an examination of the similarities and differences between the dreams of senses and the dreams of reason.

Dreamers in question are described as people who live in their own worlds of thought at the expense of excluding all other suggestions, irrespective of claims of

contradictory visions by others and with no significant empirical instances which would be able to warrant their claims. The similarity between dreamers of reason and dreamers of sensations is that they both live in their own world in the sense that they construct a reality not available to or verifiable by anybody else. However, two types of dreams cannot bear the same explanation since they originate in different deceptive mental operations. Dreamers of reason, also called day-dreamers, are immersed in their own thoughts to the extent that they pay no attention to sense perceptions. This does not mean that they are incapable of making a distinction between the inner and the outer, their imagination and real perceptions. It is just that they conceive of reality solely on the basis of the former and ignore the latter altogether. By contrast, spirit-seers, or dreamers of senses, believe they perceive imaginary objects externally as if they were received through ordinary sense perception. The products of imagination and objects of real sense perception appear in the same perceptual field. The deceptions of metaphysicians could be prevented either by voluntary control of mental faculties or by taming one's idle curiosity. The case of spiritseers is of a more serious nature. The level of conviction is often such that no amount of willpower or rationalisation can sober them up.

Although metaphysics suffers from similar deficiencies to *Schwärmerei* it has at least two advantages. Firstly, it tries to answer questions formulated by the mind rather than render uncommon experiences meaningful. The other advantage is that it tries to settle whether a given problem is sufficiently determined for human knowledge and whether it is in conformity with the concepts of experience.

Both types of dreamers find themselves in a sharp contrast to what Kant calls, "quantitative" sciences, whose practitioners are able to live in a "common world". He suggests that in the light of recent developments in the natural sciences, we may expect that philosophers too, will wake up and find the way to live up to the standards of agreement in natural science. In comparison to such achievements, philosophy has a greater similarity to occulted visions of *Schwärmers* than to scientific practices. Or in Kant's words, philosophy is

> no more than a fairy tale from the Wonderland of Metaphysics. . . Why should it be more glorious to allow oneself to be deceived by pseudo-grounds of reason with blind faith than to hold some carelessly-acquired beliefs and allow oneself to be taken in by deceptive tales, instead?[44]

The arbitration in philosophical inquiry is by necessity split between two methodological poles: *a priori* and *a posteriori.* These poles act like a double-edged sword that can turn either way. Natural sciences take the latter option and start from *a posteriori* facts in order to advance to more general principles. Although this approach is worthy of praise, Kant tells us that it is "by far not philosophical and scientific enough."[45] Building from a limited number of experimental data, for example, necessarily leads to a deadlock. We arrive at a question "why?" to which we have no answer. On the other hand, if we start from the principles of reason alone,

[44]*Dreams*, p. 76.

[45]Ibid., p. 79.

both the starting and the finishing points of the inquiry are undetermined. There is no criterion to tell us where to start and where to finish. The constraint of accommodating experience starting from *a priori* reasoning cannot act as a regulative principle either. One is always able to deductively guide reason so that it apparently explains any number of empirical data.

Having those remarks in mind, it may not be far-fetched to say that Kant's esteem of metaphysics in *Dreams* had reached its "all time low". In the early 1760s Kant's attitude towards metaphysics became increasingly critical. The lack of confidence in metaphysics is already evident in the preface to *The Only possible Basis for a Demonstration of the Existence of God* from 1762. Kant says there, that if we search for a demonstrative certainty of God's existence we have to throw ourselves to the "bottomless abyss of metaphysics" which is indeed "a dark sea without shores and lighthouses." As a consequence, he abolishes traditional natural theology. In the *Prize Essay*, from the same year, he makes a major break with rationalism and claims that metaphysics cannot attain to the same degree of certainty and clarity as mathematics. It should rather look to Newtonian science for methodological solutions. This strategy was further applied and illustrated by examining the concept of negative quantities in mathematics and physics, comparatively, in *An Attempt to Introduce Negative Quantities in Philosophy*. The issue here revolved around the distinction between **real** and **logical** oppositions. However, although sharply critical of rationalism, Kant still did not question the possibility of metaphysics. As long as metaphysics would follow the method of Newtonian science, it would be able to embark on the secure path of

knowledge. F. C. Beiser suggests that it was in late 1764 and early 1765 that his views underwent a radical change. He comes to this conclusion from Kant's remarks in his own copy of *Observations on the Feeling of the Beautiful and Sublime*, a treatise published in 1764. In those remarks Kant not only holds a decidedly negative view of the possibility of metaphysics, but even questions its desirability. More importantly, his doubts and reconsiderations, according to Beiser, led to a redefinition of the task of metaphysics: "it should not be speculation about things transcending our sense experience, but "a science of the limits of human reason"."[46] It was in the period that Kant searched for an adequate response to Swedenborg's occultism, between 1763-1766, that he finally abolished his earlier hopes of capitalizing on the programme of metaphysics in an old mould that was still populated by speculations about God, providence, immortality, the ultimate (living) force, and elementary particles. In

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[46]On Kant's writings from 1760s, see, "Kant's intellectual development 1746-1781", pp. 36-46. Beiser goes on to argue that there is a little doubt that it was the influence of Rousseau that redefined Kant's entire conception of metaphysics, further elaborated in *Dreams*. One certainly cannot underestimate this influence or its contribution to Kant's fundamental shift. However it seems implausible to indicate this event as a sole instigator of changes that led to the critical position, especially having in mind that Kant was at the same time studying Swedenborg and considering a public reply to his doctrine. As Beiser suggests the conclusions of *Observations* consist of two facets concerning the ends of reason. First, those ends should be practical rather than theoretical so that they serve humanity rather than foster idle speculations. And indeed, in *Dreams* too, there are arguments, amongst others, that suggest such an objection to *Schwarmerei*, see p. 71 and p. 96-8. Second, reason should not be taken in an instrumental sense, as a power of determining means to ends and therefore merely for the purpose of satisfying our desires. It should be the faculty of ends of reason and the source of universal moral laws. Consequently, the future implications of this insight **only** concern the practical use of reason, the belief in morality as presupposed by freedom and the power of will to prescribe universal laws. It should come as no surprise that the first conception, however vague, of the "critique", in respect to theoretical considerations, "as a science of the limits of human reason" is only sketched in *Dreams*. It is, therefore, the confrontation with *Schwarmerei* and the related truth-claims, that resulted in conceiving metaphysics as geography of *épistemé,* where science and non-science are assigned their proper places, in a relation of mutual exclusion.

Dreams his dissatisfaction reached a climax so that metaphysics could hardly be distinguished from fantasies of other sorts. Was it also the result of the frustration of being unable to give a decisive answer to the challenge of *Schwärmerei*? Contrary to one of Kant's claims that he has "at least done away with pseudo-knowledge and madness,"[47] *Dreams* leaves us more with an impression of scepticism about the methods that can sufficiently determine the subject and agnosticism concerning its principles than an unambiguous resolution of the problems tackled.[48] More appropriate as an overall conclusion to the treatise would be the second motto to this chapter. Taken as a whole the treatise suggests that even though epistemologically speaking metaphysics has indisputable advantages over *Schwärmerei*, it cannot provide methodological criteria which would lead it to the secure path of science and distinguish it decisively from the claims of pseudo-knowledge. This, however, does not mean that Kant buried all hope of finding a metaphysical formula that would lead to universal benefit. To the contrary, a new direction in terms of establishing the limits of human rational capacities, instigated new hopes in a project of reformation of metaphysics.

[47]See, *Dreams*, p. 91.

[48]Similar conclusions can be found in Broad, p.146 and Butts, p. 88.

9 Postscriptum: A Letter to Moses Mendelssohn

As I have suggested *Dreams* did not receive the reception that Kant seems to have expected. It could not satisfy the expectations of those intrigued by and committed to the subject of spiritseering, or looking for the justifications of the rumours, nor could it satisfy those who expected an unambiguous and scholarly answer. Although the book was published anonymously, there was certainly a number of addressees, "known and unknown friends", on either side of the expectations that were informed about Kant's study of Swedenborg and were awaiting his publication. According to the records of the Department of Philosophy at the University of Königsberg, the script was submitted to the Dean, Christian Langhausen, for censorship on January 31, 1766.[49] A week later, on February 7, Kant sent a few copies of *Dreams* to Moses Mendelssohn and asked him to hand copies to five other distinguished figures in Germany. Three of them were members of the Berlin Academy, provost Sussmilch, and professors Sulzer and Formey, and two were court servants, court preacher Sack and councillor of the consistory Spaulding. It may therefore be inferred that Kant had no intention of concealing his authorship. The social convention of the time seemed to require such an approach. Swedenborg publically acknowledged the authorship of

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[49]See, "Preface to the A-Edition of the Dreams of a Spirit Seer, by Karl Kehrbach, 1880", in *Dreams*, p. 171.

his exalted writings only towards the very end of his life in 1768. It did not prevent Kant from openly and unproblematically referring to him as the author of *Arcana Coelestia.*

Dreams was reviewed in 1766 by Herder and Feder, and by Mendelssohn in a respected publication, *Allgemeine deutsche Bibliothek* in 1767. The reviewers did not mention Kant as the author of the treatise. Herder's review is the longest and most responsive to Kant's ridicule of Swedenborg. According to Herder the issue revolves around the question of determining the possibility of communication between departed souls and the human community. Mendelssohn remarks that "the "bantering profundity" of the writing makes it unclear whether Kant intended to ridicule metaphysics or to render spiritseeing believable".[50] But the best indication of the reception of the book and more importantly Kant's further (and private) reflections on it comes out in his letter to Mendelssohn dated April 8, 1766. It is a reply to Mendelssohn's letter in which he expressed his opinion on the script sent to him on February 7. Mendelssohn's letter is not preserved, but Kant's reply contains some explicit hints of Mendelssohn's judgment. A closer examination of this letter will enable us to recap most of the issues discussed so far and perhaps cast more light on the opposing voices and indecision in *Dreams*.

[50]Butts, p.76. An account on Herder's review can also be found there.

After expressing his gratitude for being willing to pass his judgment on the script, Kant turns to Mendelssohn's expressions of "consternation and even displeasure". Mendelssohn is "accusing [Kant] of having displayed the honesty of [his] character in a most ambiguous light." This immediately takes us to the first of Mendelssohn's concerns which is of an ethical rather than epistemological nature. Kant assures him that even if he errs under the constraint of circumstances, he will never display an attitude of outright dishonesty and cause his friend and mentor to change his opinion about his character. Then he gives the following confession,

> It is true that I hold certain convictions and beliefs of my own which I have not got the courage to profess in public, but in what I say I shall never state something that I don't believe.[51]

I believe that this sufficiently illustrates the nature of the objection. In other words, Mendelssohn reproaches Kant for not being candid enough with his own convictions. At the same time, this means that Kant had some beliefs that he preferred to keep to himself or to express in an ambiguous manner. Speaking from multiple voices seems like a defence against direct attacks. He could always resort to saying that some of the statements were just explorations of theories based on one possible set of presuppositions, rather than his stand on the matter. What was at stake is more a risk of being ridiculed than concern about the exchange of arguments in a strictly academic

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[51]"Letter dated 8.4.1766 from I. Kant to Moses Mendelssohn", in *Dreams*, p. 155. See also *Correspondence*, pp. 154-7.

context ideally unfazed by public opinion.[52] Another strategy against public opinion was to mock himself and he says, "this I did quite sincerely, for my own mind was in a state of paradox."[53] He, then, goes on to indicate some of the beliefs that fell short of acknowledgement,

> Concerning the Historic part [first part of *Dreams*], I can't help suspecting that there was some truth in the stories mentioned, and the same applies to the principles of reason concerning them, regardless of the absurdity of the former and the incomprehensible character of the concepts, and all the concoctions surrounding them, which render them valueless.[54]

Indeed, in the book itself there are explanations and statements that lead to the same conclusion. All that we can gather from this statement is that Kant felt that he had not highlighted his views on Swedenborg's visions and supernormal powers enough in the context of contrary claims and mocking speculations. Further down he says that solutions to the problems connected to such accounts, such as the existence of the soul in this world, have to be derived from facts. Contrary to Broad's claim that Kant never

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[52]As concerning argumentation, Kant calls it in *Dreams*, "an art which the scholars practice merely to demonstrate to one another in a most skilful manner their own ignorance", see p. 43.

[53]Cassirer describes a period prior to *Dreams* as one of the most turbulent periods of Kant's search for ultimate foundations of knowledge. He refers to Herder who portrays Kant as a person who possesses certain harmonical balance which was not a gift of the nature, but was achieved through hard intellectual struggles. According to Cassirer, his major struggle came to an end with the publication of *Dreams*. See, *Kant's Life and Thought*, pp. 84-5.

[54]*Dreams*, pp. 155-6.

contemplated an empirical examination on the matter such as contemporary experiments with what is called extra-sensory perception, Kant states here the reasons for its insufficiency. Empirical data can only tell us something about the external effects of an alleged force. It is limited to the capacity of such a substance to act. It does not provide insight into its inner states. Therefore we are unable to establish the relations, causal or otherwise, between two external events on the basis of the impact of such a force.

As a matter of conviction, Kant does not believe that one can deduce the existence of such "primordial causality" from a process of deductive reasoning either. As a consequence, the force can only be considered as a poetic fiction. Those fictions nevertheless have a status of hypothesis, as *fictio heuristica* by virtue of being thinkable in the sense that they possess the absence of unthinkability. This is why Kant "ventured to defend [Swedenborg's illusions] against all those who doubted their possibility". This statement is, to say the least, surprising. For whenever Kant mentions Swedenborg in *Dreams*, he does so in a sharply critical context. Only Kant's exposition of an occult explanation of the world of spirits in the Second Chapter which articulates Swedenborg's doctrine in philosophical language can make of it a hypothetical option, if not in fact at least in logic.

In short, Kant's attitude towards *Schwärmerei* in the 1760s takes two directions. One is to show that instances of this sort cannot satisfy the criteria of proper science and

are on par with unfounded metaphysical speculations, other forms of fiction and mental illness. The other characterizes them as *fictio heuristica.* This would mean that such conjectures may offer explanations of the phenomena that cannot be sufficiently determined by scientific procedures, but which through the use of imagination may turn out to be more or less plausible in terms of possibility. Accordingly, concerning Kant's hypothesis on moral influences of spiritual beings based on the model of the theory of gravitation, he stresses that it should not be taken as a serious attempt. He merely wanted to show how far one can go working within the framework of poetic fiction.

The second Mendelssohn's objection concerns the way Kant dealt with metaphysics. Kant "failed to exercise restraint" and in Mendelssohn's eyes went too far in his criticism and wit. Kant says that he had only a limited target in mind, namely a proliferation of publications that offer exaggerated claims with no relevant foundations whatsoever, developed by pure chance rather than by design. He does not want "to do away with metaphysics entirely". On the contrary, he has high hopes for metaphysics, but he believes that in order to live up to its expectations it needs to undergo a profound reformation. Mendelssohn is encouraged to initiate this reformation by drawing "a new master plan for this science". The direction of necessary changes is sketched here,

> I have deemed it necessary to unfrock metaphysics of its dogmatic robe and begin looking at its alleged insights with more critical eyes. The

> utility of such a method is purely negative (*stultitia carisse*) but it becomes a propaedeutic for future positive knowledge. The mind of a healthy but uninstructed person requires an *organon* but the sophistry of a perverted mind requires a *catarcticon.*

One only needs to pay attention to the language used here, to recognize the concepts, in their binary oppositions, that were to play an important role in the exposition of the *First Critique*. Perhaps, it may not be superfluous to point out their future significance in a new conceptual framework. Dogmatic philosophy was superseded by what became known as Critical philosophy.[55] As "a science of the mere examination of the sources and limits of pure reason," it is called a critique. It is a propaedeutic to the system of pure reason, rather than a doctrine of pure reason.[56] Only the concept of *organon* of pure reason seems to have lost its initial significance for this project. The difference between an *organon* which abstracts from all the empirical conditions and contents of knowledge, and a *catarcticon* that directs "the rules of the employment of understanding under the subjective empirical conditions dealt with by psychology," is applied to the distinction between general and applied logic respectively.[57] Transcendental logic which now stands for general logic, does not abstract from the entire content of knowledge. It contains the rules for the pure thought of an object, excluding the modes of knowledge with empirical content and "treat[s] the origins of the mode in which we know objects, in so far as that origin cannot be attributed to the

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[55]See, *First Critique*, A ix-xii, pp. 8-9.

[56]Ibid., A 11-12, B 25, pp. 58-9.

[57]See, *First Critique*, A 52-3, B 77-8, p. 94.

objects." It concerns knowledge **in as much as** the representations (intuitions or concepts) can be employed and are possible as purely *a priori*. Since it turns out that concepts cannot relate *a priori* to objects it is a *canon*, a general principle of pure reason by which knowledge is judged, rather than an *organon*, a tool of pure reason.[58] The immediate use of the critique of pure reason, in speculation, is only negative, but through the distinction between the speculative and practical enunciations of knowledge-claims it gives rise to positive knowledge.[59] This method was recognized as transcendental, since it deals not so much with objects as with our mode of knowledge of objects.[60] In the second letter to Mendelssohn, however, there is another

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[58]Ibid., A 55-7, B 79-81, pp. 95-6. See also, A 12, B 26, p. 59.

[59]Ibid., B xxv, pp. 26-7; B xxviii-xxx, pp. 28-9; A 11, B 25, p. 59.

[60]Ibid., B xxvi-xxvii, p. 22; A 11-12, B 25, p. 59. As much as this "Copernican strategy" in epistemology may concern only the shift from the objects of knowledge to the mode of knowing the objects, without the requirement of *a priori* conditions, an early application of it may be found in *Dreams*. Regarding the status of the dreams of spiritseers, Kant asks,

> ..how the soul is capable of exteriorising an image which it normally ought to represent as within rather than amongst the objects of experience really perceived outside whereby its entire relationship is changed... we are not interested in knowing **that** such cases occur but **how** they occur. p. 61.

Considering the truth of a spiritseer's visions, the most serious objection does not concern the objects of those visions, the state of the soul after death, the relation between embodied and disembodied spirits, etc., nor establishing that there are such paranormal phenomena or their resemblance to other deceptions, such as hallucinations. The real question is, can we account for those occurrences as truth-claims on the basis of them being sufficiently determined by our modes of knowledge. Kant goes on to explain how the objects of visions only **appear** to be the product of outer sense, in the perceptual field of normal sense perception (see the theory of *focus imaginarius* in section 7). Although they may have real causes in the noumenal world, it is not sufficient to establish the statements derived from those visions as truth-claims. Judging from our modes of acquiring knowledge they bear the same explanations as the occurrences that involve mental derangement. In this sense, the paranormal visions and the cases of neurosis are strictly speaking

binary opposition that distinguishes between science proper and pseudo-knowledge of *Schwärmerei*. Science requires the healthy mind that can be instructed by an appropriate method. The mind that is corrupted by the prejudices of upbringing and further perverted by the influences of exalted knowledge is bound to live in its own world of dreams. This illusion due to the distortion of the mind constitutes a mental illness of a sort that could be found in both *Schwärmerei* throughout and metaphysics as currently practised. Since education is susceptible to it and can be transmitted through popular and other types of publications it is a matter of social concern and not merely of academic interest. The distinction between a healthy and perverted mind was designed in *Dreams* to demarcate between knowledge and pseudo-knowledge in respect to *Schwärmerei* and was further extended to the current state of metaphysics.

Kant further states that he is presently working on the subject and asks Mendelssohn's collaboration. He also stresses that this is really "the central point around which all other efforts are concentrated" in *Dreams*. If this was not plain enough, it is because he had to send the material page by page to the publisher. For the same reason some valuable explanations had to be omitted because they would appear out of context. The final remark in the letter suggests that "the crucial problem is to ascertain whether or not there exist real boundaries" of human knowledge and whether they are imposed

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indistinguishable.

by the limitations of reason alone or by experience that contains the premises of our reasoning.[61]

Therefore the letter gives a succinct explanation of Kant's undecidedness concerning not only the truth but also the treatment of the occult phenomena in *Dreams*. Kant made attempts in occult philosophy drawing implications for metaphysics and at the same time, explored various strategies of showing such conjunctions insufficiently founded. Thus at times, it appears as if he speaks **with** *Schwärmers* using their tone, concepts and explanations, and sometimes explicitly **against**, using the language of metaphysics. Although with some reservations, Kant used both the voice of *Schwärmerei* and the voice of reason, even mixing them at times, in order to properly encompass the spectre of his undecidedness. *Schwärmerei* constituted a problem for Kant inasmuch as he could not find an appropriate method to deal with the matter. Neither could he substantiate his suspicion that there is some truth in the stories, nor could he adequately expose the fraudulence and uselessness of such pretence to knowledge on the basis of the conceptual tools available. Metaphysics simply lacked the procedures needed to demarcate itself from occult practices such as *Schwärmerei*.

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[61]There are two more letters from the same period that document Kant's "breakthrough" concerning metaphysics. In December 1765, Kant wrote to Lambert that he had finally found the method that would deal with the problem of the lack of universally accepted criteria in metaphysics. All his recent works revolve around this problem, he says. We also find out that Kant planned to write a book entitled "The Method of Metaphysics" by Easter 1766. See *Correspondence*, pp. 47-9. In May 1768, Kant wrote to Herder that his prime interest is to "determine the proper ends and limits of human power and desire," and therefore he wants to write "a metaphysics of morals." Cf. Beiser pp. 47-8. See also Werkmeister, p. 3.

In the next chapter I will try to survey the facets of Critical Philosophy which offer resolutions to the problem and provide demarcation criteria and policies.

Chapter 3

Epistemological Geography

> The revival of the science of geography. . . should create that unity of knowledge without which all learning remains only piece-work.
>
> Kant, *Physical Geography*

Amongst Kant's interest in particular empirical sciences, geography certainly occupied a special place. This is apparent if one considers the persistence with which he lectured on the subject. He introduced the study of geography to Königsberg University in 1756 and kept on lecturing without interruption until the year before his retirement in 1797.[1] At the time, there was still no single chair in geography at European universities and geography struggled to gain recognition as a viable academic discipline. It required a special exemption from the Minister of Education, von Zedlitz, to use lecture-notes for Kant's course since no text-book was available. His interest and study were a pioneering effort in introducing geography as an academic study and determining its proper field. It eventually resulted in one of the first appointments, in Europe, in geography at Königsberg University, a century later. Kant, however was not a practising geographer. The body of his lectures that deal with "descriptions of the whole [surface of the] earth," is merely taken from many different

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[1]See May, p. 3.

sources, some classical some contemporary, and compiled in a systematic manner. His main contribution is to be found in determining the nature of geography and its place among other sciences.

The publication of Kant's lecture-notes on geography was in a sense the result of pressure exerted upon him. In the foreword to *Anthropology*, he announced that due to his advanced age and the illegibility of his notes, it would be impossible to produce an edition of his *Physical Geography*.[2] However, there was in Germany a wide-spread interest in his notes and a certain Vollmer compiled and published some of them in 1801. Kant condemned this edition and called on his assistant Rink, to edit an official version. The most interesting part of *Physical Geography* is its introduction for there he examines the nature of geography in relation to other studies. It dates from the 1770s and there seemed to be no need for changes in the light of critical improvements of his philosophy. The importance of geography, broadly speaking, lies in its predisposition to provide a general framework for classifying and grouping the information concerning "the knowledge of the world," according to the location from which it originates. It is particularly suited as a "purposeful arrangement of our knowledge," as all empirical knowledge could find a place. Kant calls it a "propaedeutic", a preliminary and essential knowledge that facilitates more advanced work. Accordingly, his course was given at an introductory, first-year university level. At a more basic level the map-work is intended to introduce the child to the discipline

[2]See, *Anthropology*, footnote on p. 5.

Immanuel Kant's

physische Geographie.

Auf

Verlangen des Verfaſſers,

aus ſeiner Handſchrift herausgegeben

und zum Theil bearbeitet

von

D. Friedrich Theodor Rink.

Erſter Band.

Königsberg. 1802.

of scientific endeavour. It reinforces the use of imagination and at the same time imposes limitations on a free-play.[3] Besides being a propaedeutic, geography serves as an end-product of knowledge. It performs, in a sense, the metascientific and synoptic role of mapping figuratively, and in actuality of location, the end-products of empirical science and empirical knowledge acquired otherwise. Since one could not hope to encompass "all knowledge of experience" within a single academic discipline, its academic role is "popular." However here, popular, stands for a combination of scholarship and valuable information that can be introduced and communicated to a population at large. It does not have the connotation of a discipline or practice that treats the information in an oversimplified fashion which would thereby involve an essential distortion and render it valueless.

Speaking in general terms in the introduction to *Physical Geography*, Kant classifies history and geography as descriptions of time and space. But applied to nature, history amounts only to a narrative, and geography to its description. We cannot even rely on the accuracy of ancient reports since the invention of writing, let alone the speculations about prehistory. It would be, on the other hand, overoptimistic to expect that one could ever "describe the occurrences of the whole of nature as they have been through all time."[4] Such a task simply does not represent a feasible research programme. Moreover, geography should be considered as foundation of history,

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[3]See May, p. 133.

[4]*Geography*, p. 260.

because "occurrences have to refer to something."[5] In other words, because of the nature of historical data, as opposed to geographical data, it can best be arranged in geographical terms and not *vice versa*. This issue being settled, Kant defines physical geography "as a general compendium of nature."[6] It is not only the foundation of history but also of all other possible geographies: mathematical, moral, political, commercial and theological. Mathematical geography deals with the shape, size and motion of the earth, and its relationship to the solar system; while moral geography, for instance, describes the diverse customs and characteristics of people of different regions.

Geography, thus, plays an important role for the empirical sciences, in terms of organizing and arranging data and providing a necessary introduction for students of disciplines that deal with the empirical knowledge of nature. But, does geography have any bearings on knowledge otherwise. Richard Rorty, amongst others, has stressed that Kant was the first to make a clear distinction between epistemology and science, the examination of the conditions of possibility of knowledge in general and the study of natural and social phenomena.[7] In Kantian philosophy the post-Aristotelian split between physics and metaphysics,[8] urges for different types of expertise altogether.

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[5]Ibid., 261.

[6]Ibid., p. 263.

[7]See, Rorty, pp. 52-3.

[8]Metaphysics is, of course, taken in a different sense in the Kantian context, than in the traditional.

Transcendental logic furnishes the conditions of possibility of synthetic *a priori* knowledge, notwithstanding the empirical content. The modes of knowledge with empirical content, namely empirical sciences, on the other hand, explore various types of phenomena concerning nature and man, following the former's guidelines. Although philosophers and scientists widely came to see themselves as working in different fields only in the nineteenth century, Kantian philosophy is said to have laid the foundations for such a development. In the context of the Habermas-Lyotard debate concerning modernity, the role of a legislator of knowledge that operates on a meta-level and discovers, describes and prescribes the conditions of knowledge to the community of knowers, should, thus, be understood as initially and essentially a Kantian conception.[9] Therefore, if geography presented for Kant a sort of metascientific skeleton and at the same time an introduction to empirical sciences, this model would be of some importance for his epistemology.

One obvious way in which geographical description may play a role in epistemological discourse is in a metaphorical sense. As we know it, philosophical language is by no means immune to metaphor.[10] Kant's own acknowledgement of this fact can serve as

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[9]See, Jürgen Habermas *Legitimation Crisis* (Boston: Beacon Press, 1975) and Jean-François Lyotard *The Postmodern Condition: A Report on Knowledge* (Manchester: Manchester University Press, 1987).

[10]One would be able to object that an analysis of the metaphor in philosophical texts would be an inappropriate guideline for enquiring about epistemological procedures, although traditionally, metaphor does not necessarily constitute an obstacle to philosophical or scientific knowledge. However, its work is limited, more often than not, to an inspection of concepts. It works as a test-case in conceptual analysis, i.e. reveals a concept as a bad metaphor or illustrates a new concept. Moreover it is generally characterized by a provisional loss of meaning.

an illustration. Metaphor figures as a symbolic function, an indirect presentation of an intuition to a purely rational concept, distinguished from a direct bridging function of shemata. In the *Third Critique,* when he discusses the theory of hypotyposis, he remarks, in passing,

> In language we have many such indirect presentations modelled upon an analogy enabling the expression in question to contain, not the proper scheme for the concept, but merely a symbol for reflection. Thus the words **ground (support, basis)**, to **depend** (to be held up from above), to **flow** from (instead of to follow), **substance** (as Locke puts it: the support of accidents), and numberless others, are not schematic, but rather symbolic hypotyposes, and express concepts without employing a direct intuition for the purpose, but only drawing upon an analogy with one, i.e. transferring the reflection upon an object of intuition to quite a new concept, and one with which perhaps no intuition could ever directly respond.[11]

Nonetheless, in recent years there have been a number of studies that attempt to correct such a view. For example, Jacques Derrida's forceful examination of the role of "metaphor in the text of philosophy," in *White Mythology*, I believe makes a strong case towards recognizing the "intrinsic" character of metaphor and metaphorical figures in the texts of philosophy. Along with intuition, the concept and consciousness, Derrida finds that it "belongs to the order and the movement of meaning."(see, p. 270) He shows that rather than an "extrinsic ornament," metaphor involves the usage of philosophical language in its entirety. Derrida's philosophy, following the Saussurean distinction between the signifier and signified, insists that sign act for the presence of meaning, consciousness, substance, etc. in their absence. As a consequence, for example, a "proper" philosophical concept acts as a supplement, as much as a metaphorical expression does. Therefore, metaphor is so enmeshed in philosophical language that it cannot be subordinated to or isolated from the purely philosophical exposition. By necessity, it works in the text as an equally effective and significant component of the production of meaning, in its own right.

[11]*Third Critique*, p. 223. See also Derrida, p. 224.

Considering geography's role in empirical science, it is not surprising that Kant often uses metaphorical figures that involve spatial relations and descriptions in order to characterize his enterprise. More than merely topological or topographical sketches, so common to the Western épistemè, they tend to describe landscapes and human impositions on them. Hence, in an already cited instance in the *Only Possible Basis*, Kant asserts that obtaining demonstrative certainty of God's existence requires plunging into "the bottomless abyss of metaphysics." Further, metaphysics is characterized in a fashion that will later be reserved for the *noumena*, as "a dark sea without shores and lighthouses."[12] Of special concern for our argument here will be two metaphors that, in view of some of the questions raised thus far, will require closer examination. They both involve geographical descriptions used to map the épistemè and demarcate between legitimate knowledge-claims and *Schwärmerei* or pseudo-knowledge in general. The first metaphorical formulation summarizes one of the possible conclusions of *Dreams of a Spiritseer,* in the following manner,

> Metaphysics becomes a true science tracing the limits of human understanding. Just as a small country with long border lines, is more concerned with exploring and defending its territory than blindly pursuing new conquests, so is this aspect of metaphysics, . . . I have not tried here to delineate precisely these border lines but I have indicated them with sufficient clarity. . . I did not present [the reader] with new insights but at least I have done away with madness and pseudo-knowledge.[13]

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[12]See Beiser, p. 39.

[13]*Dreams*, p. 91.

The second, opens the section on "Phenomena and Noumena" and is placed on the symbolic (and physical) border between the Transcendental Analytic and Transcendental Dialectic in the *First Critique*. It stands as an introduction to the examination of the limitations of the employment of pure reason,

> We have now not merely explored the territory of pure understanding, and carefully surveyed every part of it, but have also measured its extent, and assigned to everything in it its rightful place. This domain is an island enclosed by nature itself within unalterable limits. It is the land of truth-enchanting name!-surrounded by a wide and stormy ocean, the native home of Illusion, where many a fog bank and many a swiftly melting iceberg give the deceptive appearance of farther shores, deluding the adventurous seafarer ever anew with empty hopes, and engaging him in enterprises which he can never abandon and yet is unable to carry to completion.[14]

The former metaphorical figure offers one of the first definitions of metaphysics as a project of "tracing the limits of human understanding." Although its features have been indicated rather than explained, the end result is clear enough: it sets the border

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[14]*First Critique*, A 235-6, B 294-5, p. 257. Nietzsche takes a special notice of this metaphorical figure. In *Thus spake Zarathustra* he envisages a philosopher as a seafarer. Thus the same metaphorical language takes philosophy in an opposite direction that seems to bear reminiscence of Kant,

> It will seem to us [argonauts] as if, as a reward, we now confronted an as yet undiscovered country, whose boundaries nobody has surveyed yet, something beyond all the lands and nooks of the ideal so far, a world overrich in what is beautiful, strange, questionable, terrible, and divine that our curiosity as well as our craving to possess it has got beside itself-alas, now nothing will sate us any more! See Nietzsche, p. 338.

beyond which the knowledge-claims have solely negative attributes, being pseudo-knowledge or madness. In the latter case the sketched project has been executed and "the territory of pure understanding" systematically explored. The overstepping of the demarcation lines is no longer characterized by flat rebuttal, but by an equally natural and tempting enterprise which does not only fail to fulfil its own promises but tends to keep us in delusion. Both passages at the same time describe a geography of épistemè. In the first, the territory of human understanding is enclosed within borders analogical to the border of a small sovereign state. Considering the size of the state and the length of the borderlines, it does not seem plausible to pursue further conquest, since the very sovereignty might be at stake. Hence, the defence of the borders is of vital importance. In the *First Critique* the border ceases to be the product of social interaction and becomes a matter of natural geography. Nature itself curves the shores of an island, the safe haven of the pure understanding. As long as we are residing on this island we may be secure in respect to our needs to know and make sense of our knowledge-claims. But travelling and exploring the ocean which surrounds the island is not only dangerous, but has some sort of addictive effect. It is like a gambling game which only brings losses when one is not able to stop playing. In spite of perpetual losses one is under the constant impression of possible magnificent gains which can never actually take place. In both cases, Kant stresses that mapping the territory of human understanding requires a thorough survey. In the former, this stands more as a promise than as an accomplishment. Hence, the lines of demarcation have only been indicated. They amount to a weaker claim conceiving the border as a product of social interaction. In the latter, prior to its declaration, pure understanding has undergone a critique that exhausts its configuration according to the

conditions of possibility. Thus, we have a stronger claim that finds the lines of demarcation inherent in the nature of human knowledge. The map is discovered rather than constructed.

Thus, if physical geography assigns particular places to the various disciplines of empirical knowledge, we may call the metaphorical use of geographical descriptions that inform about the status of knowledge-claims in general, epistemological geography. I will use this type of mapping of the terrain of épistemè as a point of departure in enquiring about Kant's doctrine of demarcation. In what follows, I will briefly return to *Dreams* to analyze the initial context of the metaphor of demarcation and then look at the implications, in the first and second editions of the *First Critique*, respectively, of its transformed and final form.

1 Demarcation and *Schwärmerei*

In spite of some ambiguity and multiple approaches to the problem of *Schwärmerei* in *Dreams*, the concluding sections of both the historical and theoretical part of the treatise offer a single, most plausible resolution to the problem. If there is a decisive answer, Kant insists that it is based on the limitations of human knowledge, the realisation of which saves us from fruitless projects.

The decisive factor that places *Schwärmerei* outside of the scope of legitimate knowledge, as Kant repeatedly stresses, is the lack of empirical data to support its knowledge-claims. Considering the rarity of occult phenomena, the lack of demonstrable repeatability and thus, the private character of such experiences, data acquired in such a fashion cannot have any significance in obtaining objective knowledge. The lack of agreement and uniformity of such reports is a dominant characteristic. Therefore, they are useless in terms of a foundation for any proposed laws. Swedenborg's descriptions of the state of the world of spirits are bound to remain private experiences. On the other hand, the reports of his visions at a distance, missing objects, etc., offer limited insight into extrasensory perception. As we have seen, Kant initially had some interest in compiling the evidence that would support or

reject such instances. However, in *Dreams*, the questions posed concerning alleged supernormal insights take a "Copernican" turn. It is no longer a question of whether such instances actually occur, but of how we can explain their possible occurrences on the basis of human knowing capacities. Even when Kant expresses hopes for the future exploration of the phenomena via "new experience and new concepts of our occult powers which lie hidden in our thinking selves," he is quick to play down their possible significance and insist on their uselessness.[15]

Kant, thus insists that "the right decision," as to the status of occult phenomena, "must be left to experience alone." The claims of *Schwärmers*, on the other hand, are confined to the domain of the supersensible. Even though they do not contradict the rules of thinkability, there is no satisfactory evidence that would support their foundations. As such they may proliferate illusions which are not liable to any epistemological criteria. Metaphysics, the very conceptual framework from which Kant conducts his investigation, as practised to the present day, suffers from the same epistemological free-play. However, in terms of a natural predisposition,[16] metaphysics has an indisputable advantage. It frames the problems in a more elaborate way and

[15]See *Dreams*, p. 96.

[16]Already in the *Prize Essay*, Kant claims that "a metaphysics has never been written." See, Polonoff, p. 190.

asks whether they are sufficiently determined by human knowledge.[17] This is the aspect of metaphysics that Kant wants to explore in an attempt to reform it.

However, in order to distinguish between productive and unproductive problems one needs a model of practice that may be conceived on such criteria. Natural science was singled out as such a practice in the *First Critique*. Due to a revolution that was characterized and anticipated by Bacon's "ingenious proposal," only a century and a half before, natural science entered the "highway of science."[18] Along with mathematics, that earned this status long ago, it presents the model for methodological procedures in metaphysics. "Their success should incline us," declares Kant, "at least by way of experiment, to imitate their procedure, so far as the analogy which, as species of rational knowledge, they bear to metaphysics may permit."[19] At a much earlier stage, however, in the *Prize Essay* of 1762, he already rejected the applicability of a deductive mathematical method in metaphysics. For Kant, mathematics is primarily a formal guide of inference and not itself a source of material principles be they physical or metaphysical. Instead, he opted for the opposite approach, which was more prone to the inductive method employed by natural science. "The genuine method of metaphysics is in fundamentals identical with that which Newton

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[17]See, *Dreams*, pp. 90-91.

[18]See, *First Critique*, B xii-xiv, pp. 19-21.

[19]Ibid., B xvi, p. 22.

introduced in the natural sciences."[20] Thus, in *Dreams*, both *Schwärmerei* and metaphysics have been evaluated in comparison to natural science. After stating that philosophers too, are but the builders of dream-castles, unable to live in a common world of experience, Kant expresses some hope that they will be bound to wake up soon. As an ironic reminiscence of exalted discourse, the prediction follows,

> The philosopher might then be able to live in a common world, just as exponents of the quantitative sciences have been able to do for some time in the past. This event is likely to happen fairly soon if we are to rely on certain signs and omens noticeable of late on the scientific horizon.[21]

I have already mentioned that the claims of *Schwärmerers* cannot have the same status as the hypotheses that we find in natural sciences. According to Kant, since they are only able to satisfy the requirement of thinkability, they can amount to no more than poetic imagination, "the last refuge of reason deprived af all other means of knowledge." Hypotheses, on the other hand, Kant claims "are not trying to invent new fundamental principles but merely relate those already known by experience to different phenomena in a manner which corresponds to them."[22] He then turns to Newton's physics as a prime example. Newton's pronouncement that "[he] frame[s] no

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[20]Quoted in Polonoff, p. 191.

[21]*Dreams*, p. 59.

[22]Ibid., p. 95.

hypothesis," and his insistence that his procedures are purely inductive, is quite clearly taken at face value by Kant. And it is, for Kant, its demonstrative force that makes all the diference in contrast to *Schwärmerei* and metaphysics,

> The observations of recent times, solved by the help of mathematics, have revealed the existence of the force of attraction in matter (which appears to be a fundamental principle) of which there is nothing more we can know than we do know. Had anyone invented such force without being able to substantiate it by means of proof taken from experience, we would merely have laughed at him as a fool, and rightly so. In such a case, grounds of reason, whether used as an argument for the possibility or impossibility of a thing, are absolutely irrelevant. The right of decision must be left to experience alone.[23]

The status of Newton's laws is not that of hypothesis, but it is said to rest on observations and is supported by mathematical demonstration. His laws explain the widest possible range of phenomena and may as well be the fundamental principles of motion in nature. In comparison, *Schwärmerei* does not have any means to provide evidence taken from experience for its claims about the supersensible. Metaphysics, in current practice, seeking the grounds of reason equally evades both the legitimate procedures of justification and the assessment of their claims. The other essential feature of this highly successful method, is that it does not try to solve the problems

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[23]Ibid., p. 96.

encountered on the way that cannot be embraced by described modes of justification. Scientific endeavour does not venture beyond the observational data. "The fundamental concepts of things as causes, forces and actions must be quite arbitrary, and as such they cannot be proved or disproved, as long as they are not derived from experience."[24] And it seems that on the basis of this criterion, Kant closes the case of the "cause" of Newton's force of attraction. Against Newton's own hopes and research objectives, of which Kant might not have been fully aware, no further knowledge on the subject is possible.

We can never expect to exhaust the domain of empirical knowledge so conceived, according to Kant, for the complexity of even the smallest constituents is almost immeasurable. The case is quite the opposite concerning the philosophical cogitations of exalted doctrines about the world of spirits. Since no data are available, they can never be completed in a positive sense. Thus, the criteria for the assessment of knowledge-claims require that "such knowledge can only be completed in a negative sense, by setting definite boundaries to our knowledge."[25] But, even the possibility of such negations rests on poetic imagination. The completion in the negative sense can neither be inferred on the basis of experience nor on those of deductive reasoning. Nevertheless, doctrines about spiritual beings play an important role in drawing the demarcation lines,

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[24]Ibid., pp. 94-5.

[25]Ibid., p. 70.

> The science of spirits (pneumatalogy) can supply man with a doctrinal concept showing his inevitable lack of knowledge with regard to an alleged class of (spiritual) beings, and as such it becomes adequate for the task.[26]

Rather than merely being on the other side, *Schwärmerei* is on the very frontier between knowledge and pseudo-knowledge. That is, it reminds us that there are legitimate borders that ought to be defended. And it gives us an imaginative conjecture about the unknown land which is itself, by definition, the kingdom of conjectures based on imaginary. In other words, it exemplifies what can never be known and shapes the very borderlines of the knowable. Or, further, if you like, it stands for the Other of knowledge which in turn produces the identity of knowledge, its use-value, its *raison d'être*.

Hence, in *Dreams,* I would suggest, we witness the establishment of one of the basic ideas of Critical philosophy and in the *First Critique* in particular, namely the conception of a limit, a *Grenze*, to the field of that which cannot be asserted as knowable. The *Grenze* is drawn on the basis of two models of different practices: natural science and *Schwärmerei*, and particularly Newton's physics and Swedenborg's spiritseeing. The former would stand on the positive side of knowledge by providing the model for the criteria of productive questioning. The latter would configure the negative side, representing the unproductive and the Other of knowledge. In *Dreams*,

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[26]Ibid., p. 71.

this distinction gives rise to several oppositions, between knowable and merely thinkable, sensible and supersensible, useful and useless enquiries. In the *First Critique* this will be extended to further inflections: the "things" of possible experience versus the things in themselves, the phenomenal versus the noumenal, and so forth.

The *Grenze,* "only indicated" in *Dreams*, seems to be in consonance with two of Socrates' strategies. One would be his practice of "systematic ignorance," that is, coming to know what and in what respects we ultimately cannot know. It acts like a schema that specifies the various dimensions of experience and thought in which the Other eludes us. This Socratic aspect of demarcation will be further explored in the *First Critique*.[27] The other, evaluates objects of knowledge according to their significance for our *condition humaine.* It is summarized in Socrates' question: how many things are there which I don't need?[28] This strategy features in *Dreams* and stands in a close relation to the influences of Rousseau apparent in *Observations.*[29] It should be noted that Kant does not go as far as explicitly giving the primacy to practical ends of reason over theoretical ones. However, in addition to the theoretical parameters, sketched so far, we find that contrary to some beliefs, morality need not rely on a belief in or an insight regarding the "other" world. In the past, science showed much vanity by assessing its research programme on the pretext of

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[27]Surber finds this strategy at work in the concept of reflection, see p. 300.

[28]See, *Dreams*, p. 93.

[29]See, Beiser, pp. 36-46. See also the footnote 39 in the second chapter.

importance. But, if the philosophical insight into life in the "next" world is impossible, it is only prejudice that prevents us from admitting that such knowledge is useless and unneccessary. For in what sense does one become virtuous on the basis of the existence of another world? In common experience, we find that people with alleged insight into the workings of the afterworld, are often liable to vice and corruption. They merely try to redirect their acts so that they fit into their own conception of consequentialism. Swedenborg seems to be no exception to this observation. We can further ask the question, is it not only an intrinsic good, unconstrained by the deterrent of potential punishment in the other world that actually amounts to virtue? "Does not the heart of man contain its own moral law," asks Kant, "and is it really necessary to start up the big engines from the other world to induce man to move in the direction of his destiny."[30] By contrast to doctrinary knowledge, moral faith leads man to his true purpose, unfazed by the subtleties of reason and discursive arguments.[31]

2 The Silent Decade

For Kant, the late 1760s were the period of hope in a steady capitalization on his newly devised conception of metaphysics. This is well documented in the letters to

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[30]*Dreams*, p. 97.

[31]See, ibid., pp. 96-8.

Lambert, Mendelssohn and Herder. But, rather surprisingly the *Inaugural Dissertation* from 1770, seems to ignore this insight completely. Rather than going further in his attempt to determine the "limits of human reason" within the instances of sense experience, sketched in *Dreams*, Kant's *Dissertation* employs an *elenctic* use of intellect that prevents sensible concepts from interfering with intellectual concepts. After describing dogmatic metaphysicians as dreamers of reason, Kant now strives for an insight into the purely intelligible world without requiring any application or verification in experience. I will not go into the reasons for this puzzling shift in such a short span of time. However, it is important to notice that the *Dissertation* carries many important conceptual developments crucial for the exposition of the *First Critique*. The distinction between sensibility and rationality is ascribed to two separate faculties of knowledge. The objects of sensibility are coined *phenomena*, the objects of rationality *noumena*. There are four *a priori* concepts: existence, necessity, substance and cause, that necessarily condition thinking of any object whatsoever. Space and time are defined as *a priori* forms of intuition.

Despite the abovementioned shifts, the revival of speculative metaphysics did not last for very long either. As we know from the often cited letter to Marcus Herz from 1772, Kant's work on the *First Critique* started that year under the title "The Limits of Sense- Experience and Reason." In this letter Kant formulates as his key problem the relations of representations to objects, especially in respect to *a priori* concepts. A rereading of Hume, probably sparked by the translation of James Beattie's *An Essay on the Nature and Immutability of Truth*, had an impact on the way the problem was

to be solved. Beattie's book was published the same year and contained long summaries from Hume and important passages from the *Treatise* that had hitherto been untranslated. It took Kant nine years to assign his concepts their respective places and for the proper arguments to unfold. In this period, between *Dissertation* and *First Critique*, otherwise known as "the silent decade," Kant only published a two-page review of Peter Moscati's paper on the bodily differences between animals and man, and a fourteen-page essay *On the Different Races of Mankind.* Notes and Reflections from the 1770s offer only a limited idea of the immense work that profoundly transformed the conception of metaphysics in the *Dissertation.*[32]

From the silent decade as well as the critical period, there are also some lecture-notes from Kant's course in Rational Psychology that regularly refer to Swedenborg. What we can gather from two sets of transcripts, one from the late 1770s and the other from the early 1790s, is that these lectures are primarily concerned with the nature of spiritual intuition, and the communication and communion of the spirits in the afterlife. Thus, for example, we find Swedenborg's view that there is a continuous interaction between embodied and disembodied souls. Spirits communicate with us by means of thought and representations hidden in things. We are in this life, without being aware, in communication with the "dead" as well as with souls living in far distant places. Our soul already occupies a position in the divine hierarchy, in heaven or hell, and so forth. References to Swedenborg bear no criticism and views attributed

[32]For the study of Kant's "Reflections" from the 1770s in English, now known as the *Nachlass*, see W. H. Werkmeister's *Kant's Silent Decade* (Tallahassee: University Presses of Florida, 1979).

to him were not challenged in any way. But, Swedenborg's doctrine was discussed alongside of other occult teachings, such as Neoplatonism and Kaballah, and does not seem to be presented in order to be critically assessed. According to Butts, Kant was especially interested in the continuity of the state of soul in the body and in the afterlife. He considered the question of the location of the soul as crucial for the resolution of the mind/body problem. Swedenborg's claims would, therefore figure as one possible option that may in one way or another contribute towards the solution of the problem.[33] Whatever the case may be, it is clear that Kant did not live up to his early pronouncement in *Dreams*, ". . . now I lay aside this whole subject of spirits, a remote part of metaphysics;. . . in future, I shall display no further interest in it."[34] At the same time, this is not to suggest that the continuation of Kant's interest implies any significant shift in his position towards Swedenborg. On the basis of lecture-notes in question, there seem to be no indications that Kant incorporated any of the occultists' accounts into the scope of positive knowledge in the *First Critique*. Instead, the notes rather imply that Kant continued to consider them as *fictio heuristica*. That is, they are incapable of offering any insight into the state of affairs, but are still worthy of logical consideration as thinkable conjectures. In this context, Swedenborg's doctrine might have been seen as providing instances of creative imagination that are more operative or indicative of the unknown terrain than other similar attempts.

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[33]See, Butts, pp. 82-4.

[34]*Dreams*, p. 71.

In the period between 1766 and 1781 when the first edition of the *First Critique* appeared, Kant's philosophy underwent a tremendous change. Many of the early concepts were developed further and new ones introduced into a conceptual scheme that was destined to leave an impact on post-Kantian philosophical language. Most of the problems that preoccupied Kant's interests in the precritical period either found their legitimate place within Critical philosophy or were exposed as pseudo-problems. I will not be able to follow Kant in all his applications of the idea of a limit, which, to a large extent, marks his entire critical endeavour. I will limit myself to an examination of what is the most explicit exposition of demarcation elaborated along the lines of the division between *phenomena* and *noumena* and inspect its implications, for it is here that the model of Swedenborgian *Schwärmerei* still plays its role as epistemological other.

3 Demarcation between *Phenomena* and *Noumena*

The section entitled "The Ground of the Distinction of all Objects in General into Phenomena and Noumena" is one of the focal points in the *First Critique*. On a first encounter this section appears as an unnecessary extension of the teaching in "Transcendental Analytic," since the outcome was already clearly outlined in "Transcendental Aesthetic" and "Transcendental Deduction of the Categories." Kant himself acknowledges this, but nevertheless insists that it is a summary of statements

of solutions in the Analytic and may "help to strengthen our conviction." It is also said to prepare the reader for the forthcoming questions concerning the extension of the use of understanding beyond experience, discussed in the "Transcendental Dialectic." At the same time it provides the most explicit illustration of the *Grenze* and the criteria for demarcation between knowledge and pseudo-knowledge. This conception, as Kant tells us from the outset, does not rely on the pretext of usefulness. Kant now rejects the criterion of utility of investigations brought forth in *Dreams*. Instead he argues that judging enquiries on the basis of their usefulness would be absurd, "since prior to completion of the enquiries we are not in a position to form the least conception of this utility, even if it were placed before our eyes."[35]

It is necessary to follow Kant's argument as it offers a recapitulation of previous conclusions that lead directly to the criteria of demarcation. Kant begins by recalling the main points in the preceding discussion of categories. There, he isolated a definite list of categories, pure *a priori* concepts, that make a synthetic unity of the manifold in intuition possible. Any judgment, whether empirical or otherwise, is of necessity executed through the synthetic function of at least one of those concepts, since they are the complete sum of the functions of understanding. But apart from this function they are merely logical forms without content. Although they are *a priori*, they must nevertheless be supplemented through empirical intuition. Any attempt to discover all *a priori* concepts must be based on recognition, that they are *a priori* conditions of

[35]Ibid., A 237, B 297, p. 258.

the possibility of experience. So, they cannot be deduced from concepts that relate to things in general. Irrespective of those conditions no object would be able to be related to a concept, nothing would be thought through it and it could never even arise in thought. On the other hand, they can neither be derived from experience, as such exposition would be merely accidental. An additional illustration of this point is offered in the first edition, omitted in the second. Locke's attempt along these lines did not prevent him from obtaining knowledge that far transcends all limits of experience. Hume realized this difficulty, but according to Kant, he was unable to explain how the conceptual necessary connection can match the connection in objects. It never occurred to him that the connection in objects is a function of understanding which is itself the author of experience. Therefore, he was bound to infer that experience rests on subjective necessity, that is custom. However, from his premises he consistently concluded that these concepts and the principles that spring from them could not pass beyond the limits of experience. Neither of these two empirical derivations of concepts can account for synthetic *a priori* knowledge actually at work in pure mathematics and theoretical physics. Locke is said to have "opened a wide door to *Schwärmerei*," as reason was allowed to speculate without any empirical constraints. *Schwärmerei* is, therefore, taken here in a wider sense as to include not only spiritseeing or metaphysics as conceived, for example by Wolff and Crusius, but it seems to encompass all the extensions of the use of reason beyond the limits of experience. On the other hand, Hume's scepticism could not regard reason as much more than "an all-prevalent illusion infecting our faculty of knowledge." Kant sees his own solution as a middle path, assigning determinate limits to reason, but at the same

time also, providing reason with a legitimate role in securing an objective grounding for human knowledge.[36]

The section on "Phenomena and Noumena," thus bears this language of determining the limits of human knowledge in terms of *a priori* concepts and conditions that need to be satisfied for their employment. The employment of concepts is twofold. When the concept is applied to things in general and in themselves, it is called the transcendental employment. The empirical employment is its application to appearances, that is objects of possible experience. Following the conclusions from above, if we remove the conditions of sensibility that are implied in empirical employment, we are left with mere formal conditions. There is then no condition under which an object can be subsumed under the concept. We have a thought of an object in general that cannot be determined in any sense and consequently the concept is without meaning. Hence, transcendental employment is really no employment at all.

Having summarized the outcome of the "Transcendental Deduction," Kant's scrutiny of the limitations moves from the transcendental and empirical employment of categories to the respective objects of their employment, namely appearances and

[36]See, *First Critique*, A 94, B 126-9, pp. 126-8.

things in themselves.[37] Consequently, we find that appearances are called *phaenomena* and things in themselves, *noumena*. However, the case is far from being that simple. The ambiguity of the concept of *noumena* is not only due to the fact that it had undergone a significant change from the first to the second edition, as I will show. There is also a certain number of inconsistencies within the respective versions which may be due to combining manuscripts from different stages of writing the *First Critique*. The additional problem is that it is meant to serve different functions. Firstly, it connotes the things in themselves that appear in appearances and its explication should enforce the relation between the two. Secondly, it serves as a limiting concept of the field of possible experience and thus legitimate knowledge. Finally, it stands for the "remaining things" and illustrates the unknowability of the objects of illegitimate knowledge-claims. In the rest of this section I will study the first two uses of the concept of *noumena*. In the following section, I will examine what can be said about the unknowable and in what sense it should be considered as unknowable.

The relation between appearances and things in themselves is of crucial importance for Kant. The intricacy of his argument arises from his refusal to confine the knowledge of the world to something with a solely phenomenal character and at the same time deny the possibility of knowledge of objects apart from experience. The "Transcendental Aesthetic" already established that because space and time are only

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[37]The reason for this sudden redirection in enquiry, as Addickes maintained, may be that the original beginning of this section started with the latter considerations. The opening metaphor and the résumé of "Transcendental Deduction" were added later. See, Kemp-Smith, p. 416.

subjective and *a priori* forms of any sense intuition, experiential knowledge amounts only to knowledge of appearances. But as the very word suggests, it would be inconsistent to allow appearances without anything that appears in them. In other words, it would be meaningless to posit appearances unless we assume that they are manifestations of things themselves. If we do not grant this postulate, our thinking would revolve in a perpetual circle, "for appearance can be nothing for itself, outside our mode of representation."[38] Kant now wants to correct possible misinterpretations of the conclusions of the Aesthetic. The account that defines *noumena* on the basis of those considerations varies significantly between the two editions of the *First Critique.*

The earlier version, in the first edition, starts with an assumption that claims that because the Analytic justifies the distinction between phenomenal and noumenal objects and assigns objective reality to *noumena*, the division of objects should be understood as referring to two worlds, *mundus sensibilis* and *mundus intelligibilis.* Since the modes of knowledge do not differ merely in logical form, but in a manner in which the two worlds can be first given to us, they are generically distinct. This will mean that since the objects available through sensibility represent things only **as they appear**, things **as they are** must be objects of non-sensible intuition. So one may easily be led to the conclusion that apart from the empirical employment there would be a pure, objectively valid, employment of categories. In other words, the inference consists of the following steps. Sensibility and understanding are two distinct faculties

[38] *First Critique*, A 252, p. 269.

of the human mind. In order for anything sensible, i.e. an object of sense intuition, to be given to us, it needs to be given in the *a priori* forms of intuition, space and time. Since space and time are subjective forms, the object of knowledge so acquired is an appearance. But, because appearances would be without meaning if there were no object that appears in them, we need to establish things in themselves, not accessible through sensibility. Things in themselves, in turn, would require an utterly different mode of knowledge, namely a non-sensible intuition. Thus, understanding would, through this mode of knowledge, have a direct access to objects that are generically different from those of sensibility. They would not be bound to spatio-temporal relations in any sense and understanding would explore an unmediated world. Kant even goes further in sketching what that world would be like,

> . . . a field quite different from that of the senses would here lie open to us, a world which is thought as it were in the spirit [*eine Welt im Geiste gedacht*] (or even perhaps intuited), and which would therefore be for understanding a far nobler, not a less noble, object of contemplation.[39]

Kant then, goes on to argue that this conlusion is to be corrected in the light of the considerations from the "Transcendental Deduction." He will deny the access to a "world of understanding" and all extensions of understanding beyond the field of experience. But it is important to notice that when Kant tries to indicate a conception of this unknowable noumenal world, he seems to use for this purpose the

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[39]Ibid., A 250, p. 267.

"Swedenborgian world" rather than the field of enquiry of traditional metaphysics. Leibniz's monadology, for example, professes insight that is supposed to stem from discursive, not intuitive knowledge. The impossibility of such knowledge of *noumena* relies on the empirical limitations of employment of categories, not on the lack of non-sensible intuition. Therefore the field of objects designated as *noumena* properly belongs to *Schwärmerei*. Thus in accordance with this is the suggestion that this world should be conceived as being in spirit.

Kant now continues by comparing *noumena* with the concept of a "transcendental object." A transcendental object is an indeterminate object, something=X, to which all our representations are referred by understanding. It serves as a notion of an object in general, by means of which understanding combines the manifold of sensible intuitions into the concept of an object of sensible intuition in general, one and the same for all appearances. Separated from the sensible data, it has no function and consequently it is not itself an object of knowledge. It gains meaning only through the determinations of appearances. Although *noumena* is also at times called "only the thought of something in general,"[40] it stands in the opposition to *phenomena*, and unlike the transcendental object, denotes objects that do not contribute to the experiential knowledge in any sense. Moreover, its minimal definition, as objects of a particular mode of knowledge, the non-sensible intuition, involves a positive assertion of a sort.

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[40]Ibid., A 252, p. 270.

The relation between things in themselves, *noumena* and transcendental object is dubious indeed and this is simply another attempt to introduce some clarity. For Kant at times proceeds by ascribing the function of transcendental object to *noumenon*.[41] In another instance, transcendental object is taken as interchangeable with a thing in itself and claimed to be "the cause of appearance."[42] However, in the second edition Kant eliminated all the passages in which he refers to transcendental object. It was probably due to the realization that only through a positive assertion about the *noumena*, rather than the bare transcendental object can we arrive at a limiting concept that is not self-contradictory. Otherwise, without this assertion, we would be in the peculiar position of claiming the apprehension of an object and at the same time denying the only means for its apprehension.[43] Instead, Kant now contends that *noumena* should be taken in either a positive or negative sense. In the positive sense, it would continue to signify "an object of a non-sensible intuition."[44] Taken negatively, it would refer to "a thing which is not to be thought as an object of our senses but as a thing in itself."[45] And it should be added that this is an **unknown** thing in itself. For only in this negative employment it serves as a limiting concept,

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[41]Ibid. A 254-7, B 310-12. pp. 270-3. See also, Kemp-Smith, p. 408.

[42]Ibid., A 288, B 345. p. 293.

[43]See, Kemp-Smith, 407-8.

[44]*First Critique*, B 307, p. 268.

[45]Ibid., B 310, p. 271.

> What our understanding acquires through this concept of *noumenon*, is a negative extension; that is to say, understanding is not limited through sensibility; on the contrary, it itself limits sensibility by applying the term *noumena* to things in themselves (things not regarded as appearances). But in so doing it at the same time sets limits to itself, recognising that it cannot know these *noumena* through any of the categories, and that it must therefore think them only under the title of an unknown something.[46]

Regarded negatively, Kant believes, the concept of *noumena* is sufficient to perform the function of demarcating the limits of experience and legitimate knowledge. It is a problematic concept as we cannot know anything about the existence of its object. But, at the same time, we can show that it contains no contradiction. It is capable of limiting concepts connected to a different mode of knowledge, i.e. sense intuition. If we take all this into account, Kant insists that it is not an arbitrary invention but a problematic extension of understanding.[47]

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[46]Ibid., A 256, B 312, p. 273.

[47]Ibid., A 254-5, B 310-1.

4 *Noumena* and Unknowability

I would like to examine now, the claims about *noumena* that enlarge the meaning of this concept in spite of its primary meaning of unknowability. In other words, knowledge does not appear to be an exceptional case, as one may perhaps expect, in that it does not reveal anything about its Other. Thus, the question necessarily arises, if we are to know something concerning the unknowable, how are we to go about it, according to Kant. As I examine the fragments that explicitly or implicitly enlarge the knowledge of *noumena*, I will inspect whether we can find any significant relation between the "knowledge" of *noumena* and Swedenborg's doctrine. I have already stressed one instance from the first edition, where Kant allows himself an excursion into the unknowable that may be connected to the notion of the "world of spirit." But there are also properties of *noumena* that seem justified or even indispensable in terms of conditions of possibility of *a priori* knowledge. Therefore the positive extensions of the concept can be divided into those that must be necessarily assumed and those that may serve as an illustration of the mere possibility of an extension.

I will begin with the former and delve into the issue of the non-spatiotemporality of *noumena* that is one of the frequent problems discussed by Kantian commentators. In the "Aesthetic," Kant for the first time announces that things in themselves, and

accordingly *noumena* are unknowable. The "Aesthetic" establishes that appearances are conditioned by space and time. As their opposites, the things in themselves not only require no such conditions, but cannot be thought as existing in space and time. There are two possible objections to this conclusion. Firstly, it has often been suggested that Kant neglected to consider the possibility that space and time might be both conditions of sensibility and determinations of things in themselves. In the literature on Kant this objection has become known as the "neglected alternative" argument.[49] Secondly, in what sense are things in themselves unknowable if we by the very same move assert their non-spatiotemporality, as something known. Both theses, non-spatiotemporality and unknowability are so intertwined with the rest of Kant's theoretical philosophy that we cannot lightly abandon either of them. As it has been noticed, allowing the knowledge of *noumena* would imply an illegitimate use of understanding. Or rather the very function of the concept of *noumena* is to stand for the unknowable. On the other hand, Kant is determined to use the conception of space and time as conditioning and demarcating factor between particular objects and the knowledge-claims about them. For example, our knowledge can be extended beyond the immediately experienced as long as it does not go beyond the bounds of experience, that is space and time. Hence, we know of the existence of "magnetic matter" in the context of our perception of attracted iron filings and under the guidance of the analogies (principles of empirical connection). In other words, we know that there is such a thing as a magnetic field and that its centre resides in

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[49]See Vaihinger, pp. 134-51. On the history of this problem see also H. E. Allison "The Non-spatiotemporality of Things in Themselves for Kant" in *Journal of the History of Philosophy* 14 (1976), pp. 313-15.

bodies, even though our organs are incapable of any immediate perception of this medium.[50] In contrast, the "non-sensible causes," postulated in theoretical sciences[51] are to be excluded from the field of knowable objects on the basis of their non-spatiotemporality. They must be considered as unknowable since they cannot be represented as objects in either space or time.[52] By the same token, events in history cannot be taken as actual events, but must rely on a regressive series of possible perceptions of events in space and time.[53] Therefore, both properties of *noumena*, unknowability and non-spatiotemporality seem to be indispensable as criteria of demarcation. I will not venture here to resolve this apparent contradiction. Much has been written about it and with an increasing subtlety in recent years.[54]

For our present purpose it will suffice to remember that the division between the appearances and things in themselves on the basis of spaciality and temporality is in conformity with the way Swedenborg describes the difference between natural and spiritual entities and two respective worlds. We should not forget that the terms *mundus sensibilis* and *mundus intelligibilis* are to be found in Swedenborg's writings.

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[50]See *First Critique*, A 226, B 273, p. 243.

[51]The causes which Kant here calls "non-sensible" will be discussed below, in the section 7 of this chapter.

[52]See *First Critique*, A 494, B 522, p. 441.

[53]Ibid., A 495, B 523, p. 442.

[54]See, for example, H. E. Allison *Kant's Transcendental Idealism* (New Haven, Conn.: Yale University Press, 1983); C. Buroker *Space and Incongruence* (Dordrecht: Reidel, 1981): L. Falkenstein "Kant's Argument for the Non-Spatiotemporality of Things in Themselves" in *Kant-Studien*, vol. 80 (Bonn: Bouvier Verlag, 1989), pp. 265-83.

In the section on "Phenomena and Noumena," Kant only says that the division of "the world into a world of the sense and a world of understanding, is quite inadmissible in the positive sense." But so is the distinction between the *phenomena* and *noumena*, in the positive sense.[55] Towards the end of this section, Kant warns against the current use of the expression *mundus sensibilis* and *mundus intelligibilis* by some modern philosophers. The meaning attributed to it is altogether different from that of the ancient authors. According to the modern usage observational astronomy would tell us about the world of senses and theoretical astronomy, the Copernican system and Newton's laws of gravitation, would give an account of the intelligible world. Kant says that "it results merely in an empty play of words." In the footnote on the same page Kant tells us that *mundus intelligibilis* should not be translated as "an intellectual world," for only the mode of knowledge can be intellectual. An object of intellectual intuition must be entitled intelligible.[56] This seems to imply that there is a permissible use of the distinction between two worlds and that *mundus intelligibilis* can be considered in thinkable terms.[57]

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[55]See *First Critique*, A 255, B 311, p. 272.

[56]See ibid., A 256-7, B 312-13, pp. 273-4.

[57]In recent years there have been attempts to a plausible "double aspect" interpretation as opposed to the more traditional "double world" interpretation. Thus, the appearances and the things in themselves refer to one and the same thing; the former in relation to the subject and the latter independent from all reference to the subject. See, H. E. Allison *Kant's Transcendental Idealism* and G. Nagel *The Structure of Experience* (Chicago: University of Chicago Press, 1983). The "double aspect" theory has come under sharp criticism in R. E. Aquila *Representational Mind* (Bloomington: Indiana University Press, 1983) and M. S. Gram *The Transcendental Turn* (Gainesville: University Presses of Florida, 1984).

Another extension of the concept of *noumena*, if not necessary, certainly reinforces their relation to the appearances. Kant repeatedly stresses that things in themselves are unknowable except through some mode in which they "affect" appearances. In the "Second Analogy" he says, for instance, "how things may be in themselves, apart from the representations through which they affect us, is entirely outside our sphere of knowledge."[58] Or in *Foundations of the Metaphysics of Morals*, "they can never be known by us except as they affect us."[59] Yet again, in somehow different terms in Kant's reply to Eberhard, "[the Critique] places this ground of the matter of sensible representations not itself again in things as objects of senses, but in something super-sensible, which **grounds** the sensible representations, and of which we can have no knowledge."[60] We can add to this the already stated instance where it is said that the things in themselves are "the cause of appearance."[61] On the basis of this one can conclude that there is a sort of "noumenal causality" manifested in the phenomenal sphere. Due to this "causality" the *phenomena* are "affected by" or "grounded in" the noumenal realm. This poses another problem frequently referred to by Kant's critics. Namely, how are we to conceive this relation between the phenomenal and noumenal, if categories, and amongst them causality, are strictly applicable only to the phenomenal sphere. H. E. Allison maintains that Kant's justification for this type of claim can be illustrated through the distinction between the **ground** and the **matter** of sense intuition. The matter will be the content of any particular sense intuition, as

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[58]*First Critique*, A 190, B 235, p. 220.

[59]Quoted in Rescher, p. 462.

[60]Quoted in Allison, p. 253.

[61]See *First Critique*, A288, B345, p.293

opposed to its *a priori* forms, space and time. However, the ground would be distinct from space and time as it does not belong to sensibility. It is a product of transcendental, or non-empirical considerations. Since the ground cannot be represented in space and time, it is supersensible.[62] N. Rescher goes further in seeking for justification. He holds that Kant has two quite different sorts of "causality" in mind. One appropriate to experience and the legitimate use of categories, governed by a constitutive Principle of Causality. The other, not a properly causal grounding which is merely intelligible, governed by a Principle of Sufficient Reason. The Principle of Causality is applied to the conditioned objects of perception, The Principle of Sufficient Reason to "the unconditioned, which reason, by necessity and by right, demands. . . [something] to complete the series of conditions." The latter adds an intentional character to the phenomenal domain and points to an external noumenal order. Reason demands from us that we think this order, but does not provide us with knowledge about it.[63]

In addition to the four instances that we have encountered so far, which characterize the relation between appearances and things in themselves, there is another one in the second edition of the section on "Phenomena and Noumena," bestowed in quite a different language. Let us look now at this passages that appears to be uttered in passing and that according to Kant's commitments, may only be understood as an imaginative speculation,

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[62]See Allison, pp. 237-54.

[63]See, Rescher, pp. 462-70.

> Doubtless, indeed, there are intelligible entities [*Verstandeswesen*] corresponding to the sensible entities [*Sinnenwesen*]; there may also be intelligible entities to which our sensible faculty of intuition has no relation whatsoever; but our concepts of understanding, being mere forms of thought for our sensible intuition, could not in the least apply to them.[64]

First of all, the term *wesen* in *Verstandeswesen* and *Sinnenwesen*, translated by Kemp-Smith as "entity," seems altogether puzzling. If we take it in its proper use, as being or "real existence," sensible entity can never amount to *phenomenon* alone. In other words, the distinction between sensible and intelligible entities would refer to the "existing things," not to the objects of knowledge, *phenomena* and *noumena*. If we may look for a conjunction between this and the previous pronouncement that *mundus intelligibilis* is "conceived or intuited as being in spirit," the intelligible entities could be understood as spiritual entities. This is even more plausible as Kant now tells us that there is a possibility of such intelligible entities being in no relation to the objects of sense intuition whatsoever.[65]

Another question of more importance for us here, concerns the nature of the correspondence between intelligible and sensible entities. Should the above statement be understood as saying that appearances refer to sensible entities while things in

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[64]*First Critique*, B 308-9, p. 270.

[65]In *Dreams*, of course, this kind of statement would be justified on the basis of the distinction between the embodied and disembodied spirits.

themselves refer to altogether different entities, intelligible and possibly spiritual, that correspond to them? Since Kant's word here, *korrespondieren*, to correspond, has a wide and important role in Swedenborg it may not be superfluous to draw some possible comparisons. The idea of correspondence between *mundus sensibilis* and *intelligibilis* is one of the essential features of Swedenborg's teaching. The knowledge of correspondence is a mode of enquiring about the spiritual world, unless one has an immediate access of the sort that Swedenborg claimed to possess. Swedenborg's writings largely consist of attempts at revealing the spiritual significance of the items in the natural world and their correspondence to the spiritual things. For example, one's face would correspond to one's interiors to such an extent that the skilled would be able to make an index of his or her mind.[66] The heart and lungs, and their function in the human body, correspond depending on the level of spiritual hierarchy, to will and understanding, chastity and faith, and the celestial and spiritual kingdom.[67] But the relation between the two worlds can also be characterized in different terms. Swedenborg says that *mundus sensibillis* subsists on the *mundus intelligibilis*. Once we recognize that there is a spiritual world apart from the natural, the relation of cause and effect neccesarily follows. His key word for the relation between the two worlds is "influx," in the sense that the natural world is "effected by influx."[68]

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[66]See, Swedenborg (1909), p. 728.

[67]Ibid., pp. 636-7.

[68]Swedenborg summarizes the relation between the spiritual and the natural world in the following way,

> There is a continual influx from the spiritual world into the natural. He who does not know that there is a spiritual world, and that it is distinct from the natural world,-as the prior and the posterior, or as the cause and the thing caused,-can know nothing of this influx. This is the reason why those who have written on the origin of vegetables and animals could not but deduce it from nature; or if from God, have inferred that from the beginning God indued nature with the power

Furthermore, Kant's philosophically developed explanation of Swedenborg's doctrine in *Dreams* seems to offer a more elaborate picture along similar lines,

> A fundamental theme in Swedenborg's visions seems to be the following: material beings can have no independent subsistence; they merely subsist by the power of the world of spirits; this of course does not mean that each body exists only because of one spirit, but that each body exists by virtue of the totality of all spirits.
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> Therefore, all knowledge of material objects takes a double significance: one meaning is being obtained through the external relations of matter, and the other is obtained from the way (material things) reflect the effects of the forces from the spiritual world, for these are the true causes of (material things).[69]

Due to the briefness and abrupt context of the proposition in the *First Critique*, it seems difficult to determine whether Swedenborg's theory of correspondence has any bearing on the way Kant talks about the correspondence, or even about the *phenomena* being affected, grounded and caused. However, considering Kant's thorough-going study of Swedenborg, the language that he employs in this proposition and the lack of other possible sources or instances in Kant's writings that may shed more light on it, such an explanation may not be altogether implausible.

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of producing such things,-thus not knowing that nature is indued with no power. See Swedenborg (1909), pp. 571-2.

[69] *Dreams*, p. 86.

Next, we need to examine the nature of intellectual intuition. As I explained before, Kant modified the second edition so that it excludes the notion of the transcendental object. At the same time, he emphasizes the intellectual intuition in order to make his account consistent. Already in the first edition, he puts forward the strong claim that its assumption is necessary irrespective of whether we can find a proof that such an intuition is possible. As a matter of fact, we can neither prove its possibility nor its impossibility.[70] However, Kant is adamant that such intuition does not fall within the scope of capacities of human knowledge.[71] This claim in itself does not seem unproblematic. For the issue is not whether the supersensible or non-spatiotemporal data may be applied to the categories, but whether such data are accessible in any given sense. The unapplicability of intellectual intuition to categories is not the decisive factor that denies access to the transcendent. For Kant says,

> We can never know whether such a transcendental or exceptional knowledge is possible under any conditions, least of all if it is to be regarded as of the sort that stands under our ordinary categories.[72]

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[70]See, *First Critique*, A 252, p. 270.

[71]Ibid., A 252 and B309, both p. 270.

[72]Quoted in Kemp-Smith, p. 409. In his translation of the *First Critique* this passage differs slightly. See, A 258, B 314, p. 274.

Thus the exceptional knowledge, that is intellectual intuition,[73] is not prevented in humans because it cannot be applied to categories. The lack of this capacity in human beings stands on its own terms. Kant does not offer any further explanation of those claims and one would be justified in asking for the evidence of such human incapacity. After all, the vindication of the *Grenze* and demarcation may rely on it. It is unclear what supports Kant's view that we can neither prove nor disprove the possibility of intellectual intuition *per se*, while at the same time he holds that humans do not possess it. The answer to these questions seems enigmatic. Still as we are bound to postulate intellectual intuition, its possibility relies on some other kind of thinking subject/s, presumably not from our world and possibly some of those which Swedenborg claimed to be able to account for.

Finally, in the "Amphiboly of Concepts of Reflection," Kant addresses the issue of the possible usefulness of intellectual intuition for our knowledge once more, in a slightly different manner. He suggests that,

> Even if we assume a non-sensuous form of intuition, our functions of thought would still have no meaning in reference to it.[74]

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[73]The transcendental knowledge must involve an intellectual intuition, since only an intuition can "stand under categories."

[74]Quoted in Kemp-Smith, p.410. Again, translation slightly modified in *First Critique*, A 286, B 342, p. 292.

Kemp-Smith maintains that this is ambiguous and that there are two ways of reading it. Either it means that categories cannot be applied to things in themselves or that intuition of an intellectual kind is so remotely different from our sense intuitions, that it is incapable of giving meaning to the categories.[75] But the first sense in which Kemp-Smith takes Kant, seems quite puzzling to me. Kant in this sentence does not make reference to the things in themselves at all, but only to the possible modes of knowledge. Therefore I can see only the latter meaning being applicable to it. And with an additional precaution since Kant does not use the word "categories" but a more oblique form, "our functions of thought." If we take them as interchangeable it would run counter to the above claim that there is no way of knowing whether intellectual intuition can be applied to the categories. Taken in this second and modified sense, this proposition can be easily connected to the way in which Kant dismisses any possible use of the pneumatic intuition for our knowledge in *Dreams*. As we witnessed in the preceding chapter, Kant went to great length to show that such intuition cannot be modified to suit our spatio-temporal modes of representation, that symbols acquired in this way are not translatable to our language and are thus necessarily meaningless to us.[76]

Thus far, I have briefly examined the various extensions of the concept of *noumena* and their respective relations to Swedenborg's teachings. Now, I would like to inspect

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[75]See, ibid., p. 410.

[76]See, section 7, chapter 2.

whether the limitation of knowledge and related conjectures about *noumena*, put altogether, stand in conformity with Swedenborg's doctrine. This also implies asking whether Kant's thinkable *mundus intelligibilis* is perhaps an echo of Swedenborg's knowable one. I have already discussed Swedenborg's travelogue through the supersensible in some detail. Here, I will only make few a comparative points in order to sum up the issues in this section. Firstly, all three "concessions" that Kant makes against his own claim of unknowability: non-spatiotemporality, "grounding" of appearances and a possibility of an intuitive knowledge which differs from the sensible, also have a prominent place in Swedenborg's conception of spiritual world. Spatiotemporality presents the major difference with the regard to the way in which spiritual and natural beings conceptualize things. There is a strong sense in which the objects of Swedenborg's spiritual world do not belong to space and time. Namely, while our natural representations of changes involve spatio-temporal relations, spiritual beings conceptualize change in terms of changes of their internal states (not involving temporal relations). The issue of noumenal "causality" is dubious and requires a closer inspection which I am unable to take up here. However, it is explicit in Swedenborg's account that entities from the spiritual world contribute to the way that not only embodied spirits, but also physical objects are. Whether this might have anything to do with the "correspondence," "grounding," etc. that Kant talks about, is unclear. Finally, regarding the intellectual intuition Swedenborg gives us some direct indications. Apart from the knowing faculty, connected to the ordinary sense perception, and the rational faculty, he posits an intellectual faculty in man as a higher faculty capable of acquiring truths. However, according to Swedenborg, man, spirits and angels, can only be influenced through this faculty but can never actively use it.

It is solely the Supreme Being who can think from this intellectual mode and acquire intellectual truth. Such capacity involves intuition in Kantian terms, since it is described as "perception" which "is an interior [intellection] **in** the rational."[77]

If we supplement the three knowable properties of *noumena* with Kant's thinkable conjectures, the "stormy ocean" of noumena, reveals itself with even more conformity to the familiar Swedenborgian terrain. One would be able to construct his or her own thinkable conjecture on the basis of Kant's fragmentary propositions. It may lead to the following narrative. There is a *mundus intelligibilis*, a world that should be conceived as being in spirit alone. This world is not subject to spatio-temporal relations and is thus, generically different from our *mundus sensibilis*. The entities from our world take particular appearances due to the correspondence with the entities from the *mundus intelligibilis*. There may also be intelligible or spiritual entities that are not co-related to anything sensible. At least one of those entities would be a thinking subject who may possess a special kind of intuition that reveals the things of our senses, as they are in themselves, and so forth. Thus if one proceeds along these

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[77]Swedenborg tells us the following concerning the intellectual faculty:

> There are in man things intellectual, rational, and of knowledge; his inmost things are the intellectual, his interior are the rational, and his exterior are things of knowledge. . . The Lord thought from intellectual truth; which, because it is above the rational, could perceive and see what [is] the nature of rational. . ; but not *vice versa*. . . What it is to think from intellectual truth cannot be explained to the apprehension; and this the less because no one has thought from that affection and from that truth except the Lord. See Swedenborg (1909), p. 549-50.

lines, it would not be difficult to map the space outside the "unalterable limits," solely in Swedenborgian terms.

But even if one were justified in constructing such a narrative, I do not believe that it would facilitate a Swedenborgian reading of Kant. That is, I think it falls far short of attributing to Kant, any Swedenborgian belief that would act like some kind of regulative principle, in theory or in practice. To assume that Kant held a belief in Swedenborg's doctrine of the spiritual world and believed this to be justifiable, would be to deny his critique altogether. It would mean that one is prepared to ignore his gigantic efforts to establish the *Grenze*, and banish *Schwärmerei* and all similar knowledge-claims forever from the scope of legitimate knowledge. For Kant unambiguously concentrates on knowability. Mere thinkablility never amounts to knowledge and it may only serve as a supplement in conceiving the limits of the knowable. However, the properties that he attributes to *noumena* as well as the scattered conjectures about it, seem to point at Kant's "instrumental" use of Swedenborg already indicated in *Dreams*. Kant utilizes a Swedenborg-type of *Schwärmerei* as a model of what cannot be known. Thus, as we have seen, the distinction between what can be known and that which cannot be known falls into the binary oppositions: spatiotemporality versus non-spatiotemporality, sense intuition versus intellectual intuition, appearances versus things in themselves. And in this sense Swedenborg's doctrine stands on the "other side" or as the Other of knowledge, and at the same time serves as a limiting concept. If we look more closely into Kant's conception of the unknowable, that is *noumena*, we find more evidence that it is

consistent with a Swedenborgian model of knowledge and its objects, already sketched in *Dreams*.

5 Orientation in Geography and in Thinking

In a short article *Orientation in Thinking*, written between the two editions of the *First Critique* in 1786, Kant again uses geographical conceptions in dealing with the problem of the supersensible. He acts as an arbitrator in the dispute between Mendelssohn and Jacobi over the accessibility of supersensible objects. The "geographical concept of the procedure of orientation" is used as a starting point for a demarcation not only between the sensible and supersensible object but also between legitimate and illegitimate claims about supersensible objects. To orient oneself on the surface of the earth, Kant says, one uses the sun as a referent at daytime and stars at night. From this referent we draw an imaginary circle in which we determine the south, west, north and east. However, for an orientation to be accurate one needs more than the objective data of the sky. One needs a feeling of distinction between one's left hand and right hand. This is, Kant claims, a naturally implanted feeling which is further reinforced by frequent use. As, there is nothing in the external intuitions to inform this distinction, the objective data for orientations rely on a subjective ground. Without this subjective ground, if one day, by some miraculous occurrence the direction of stelar constellations changed from east to west without changing their

pattern, not only the layman but the astronomer too, would be disorientated.[78] Geographical orientation can be broadened by mathematical orientation in any given space. A person with impaired sight in a familiar room, for example, would be able to orient herself on the basis of knowing a single object and by using the distinction between right and left sides. From the mathematical orientation in any given space we can proceed to the logical one, that is, orientation in thought as such. Thus by analogy, the use of pure reason should be directed by the known objects of experience. If reason extends beyond the boundaries of experience, it finds no objects of intuition and no objective grounds of distinction. All that remains is the space of the supersensible, the space of the possible objects of knowledge and thus, a subjective ground for distinction. In such a case we need to test the concept of the supersensible object in terms of possible contradictions and then, relate it to the objects of experience under the concepts of pure reason. However, this does not amount to making the objects accessible through experience, demonstrating their existence or real connection to the world as a sum total of all objects of possible experience. The use of those concepts for our knowledge is to be determined rather according to "a real need associated with reason itself." In this respect we are to distinguish between two types of thinkable objects,

> Many supersensible things may be thought (for objects of the senses do not exhaust the whole field of possibility) even though reason feels no need to

[78]Kant first constructed this example in a modified form in *On the First Ground of the Distinction of Regions in Space*. Written two years after *Dreams* the example is based on orientation in heaven. Thus he says, even if we carry a complete chart of heaven in our minds and know where the north in heaven is, we could not orient ourselves unless we first make a distinction between our right and left hand. See, May, pp. 70-1.

> extend itself to them and even less need to assume their existence. Reason finds sufficient occupation with those causes in the world which reveal themselves to the senses (or at least with causes of the same kind). It does not need the influence of spiritual natural beings to further the concern, and indeed their assumption would be disadvantageous to it. For since we know nothing of the laws by which such beings might act, while we do know, or we hope to learn much about the objects of the senses, such presupposition would not extend but check the use of reason. To search after them or to play with that kind of fantasies is not a need but only meddlesome curiosity which ends in nothing except dreaming. But it is entirely different with the concept of a First Being as the supreme intelligence and highest good. For not only does our reason feel a need to make the concept of the unlimited the basis of the limited and thus of all other things; this need also applies to the presupposition of the existence of a First Being, without which reason can adduce no satisfying ground for the contingency of the existence of things in the world, least of all for the design and order which is met with everything to such a wonderful degree (in the small because is near to us even more than in large).[79]

Kant goes on to argue that in the latter case, that is, the existence of a First Being, a subjective ground (reason's need) provides sufficient ground for presupposing its existence. And this need becomes even more important in the practical use of reason,

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[79] *Orientation*, pp. 297-8.

for the practical need is unconditional. Thus, "we are compelled to presuppose the existence of God not just if we **wish** to judge but because we **must** judge,"[80] For practical reason, according to Kant, is by necessity prescriptive.

Since Kant here addresses a number of issues that have already been dealt with, an anlysis of the above will serve to recapitulate the lanscape of his epistemological geography. First, we see that Kant returns to the idea of ostracizing *Schwärmerei* and similar knowledge-claims on the basis of the purposes of reason. Initially in *Dreams*, the needs of reason were conceived on the pretext of the usefulness of the inquiry. This criterion was rejected in the First Critique since we can never judge the utility of an enquiry prior to its execution. Now, Kant insists that since we are discussing only the assumptions and not knowledge, the thinkable, supersensible objects can be clearly rejected on the rationale of needs, i.e. we do not need to assume them. Two kinds of objects that we have no need of assuming are "metaphysical" causes that are inaccessible to us by means of the senses and the spiritual beings of *Schwärmerei*. Amongst the former we should include the "cause" of gravitation. Concerning the latter, Kant reiterates his concern from *Dreams* that their assumption is disadvantageous and results in dreaming. But at the same time, he acknowledges their limiting function as "such presuppositions would not extend but check the use of reason." Finally the First Being is the single supersensible object that is not only needed but must be presupposed. Theoretically considered Kant finds support for its

[80]Ibid., p. 298.

existence in a form of the design argument. Thus God needs to be assumed for otherwise there would be no ground (required by the Principle of Sufficient Reason) for the contingencies of sensible entities, which we encounter through legitimate use of understanding. The practical use of reason, on the other hand, requires that the idea of the highest good be conceived as an objective reality, rather than a mere ideal. For it is upon this idea that the possibility of fundamental concepts of morality, freedom, and happiness rest.

Therefore, if we compare this insight with the instances which I have called epistemological geography, that is drawing the lines of demarcation in terms of the distinction between the sensible and the supersensible, it should be noticed that those instances lack an important "location" on Kant's charts. In other words, the criteria of demarcation devised to exclude the supersensible objects from the scope of knowledge, has an exception in the existence of God. That also means that Kant's criteria do not present any obstacles to religious belief. This issue has been further elaborated in Kant's other writings, *Second Critique*, and *Religion within the Limits of Reason Alone*. In both the, first and second Preface to the *Religion*, for example, Kant states that the "pure religion of reason" cannot include revelation, as a historical system and thus the disciplines of philosophy and Biblical theology, should be kept separate. Nevertheless, not only will the latter be bound to answering the challenges of the former, but the "unification, or the attempt at it, is a task to which the

philosophical investigator of religion has every right, and is not a trespass upon the exclusive rights of a Biblical theologian."[81]

6 *Schwärmerei* and the Politics of the Tone

From the very outset of dealing with the problem of *Schwärmerei* Kant warns against the possible detrimental effects of this practice on individuals as well as society at large. In *Diseases of Mind* it is not only *Schwärmers* who are presented as suffering from mental illness, but under their leadership an entire society may be infected by such mental states. The disadvantageous character of this practice, due to proneness to a delusive obsession is reiterated in *Dreams*, the opening to the section on "Phenomena and Noumena" in the *First Critique*, and *Orientation*. So as one may expect, the problem of *Schwärmerei* does not only require an epistemological consideration but also a strategy to fight the proliferation of this illness in society. Kant believed that his critique had decisively settled the epistemological issues. Its function has been described in the following way,

> In the absence of this critique reason is, as it were, in the state of nature, and can establish and secure its assertions and claims only through **war**.

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[81] *Religion*, p. 12. See also, pp. 8-10.

> The critique, on the other hand, arriving at all its decisions in the light of fundamental principles of its own institutions, the authority of which no one can question, secures to us the peace of the legal order, in which our disputes have to be conducted solely by the recognised methods of **legal action.**[82]

Therefore, the critique of pure reason is seen as having provided a sort of law of reason on the basis of which particular knowledge-claims ought to be judged. The question of assessment of knowledge-claims, in terms of their legitimate or illegitimate place within human capacities, becomes merely a matter of adequately applying legal procedures.

We need now to explore Kant's strategies against *Schwärmerei* as a matter of social concern. The approach adopted in *Dreams* was to suggest that ghost-stories and related doctrines should be ignored altogether. As there is no knowledge about such things and no need for them in terms of our moral conduct, an academic and a layman likewise, should not stir idle curiosity by discussing this issue. Kant himself claimed that he would have preferred to remain silent on the issue, had he not been prompted by his friends who eagerly awaited his verdict.[83] He also declared that he would thereafter show no further interest in the subject and direct himself towards more

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[82]*First Critique*, A 751, B 779, p. 601.

[83]See, *Dreams*, p. 69.

mediocre goals. That he tried to remain faithful to this position can be seen from the briefness of his future references to Swedenborg in his published work. For instance, there is one sentence in the *Strife of the Faculties* that associates Swedenborg with the mystics and those who phantasize the supersensible,[84] and two sentences in *Anthropology* that refer to him as a *Schwärmer* who takes sensible intuitions to be mere symbols supporting the existence of a hidden intelligible world.[85] In the *First Critique* there is no mention of Swedenborg whatsoever, and *Schwärmerei* appears only in a broader sense so that it cannot be narrowly connected to the knowledge-claims concerning *noumena*. Such a stand was firmly reiterated in 1790, when his biographer E. Borowski asked him to react against the wave of mysticism (Cagliostro's writings, astrology, and mesmerism) spreading over Germany. Kant replied,

> Lengthy counter-measures are not indicated and are not dignified, either. They won't achieve anything, anyhow! The best measure against this type of madness is to keep scornful silence.[86]

However, six years later Kant broke his "silence" once more. This time the occassion was a dissemination of writings that emphasized the alleged mystagogical features in

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[84]See Butts, p. 86.

[85]See, *Anthropology*, p. 65.

[86]"Letter from I. Kant to Ludwig Ernst Borowski, dated 1790" in *Dreams*, p. 162. See also, *Correspondence*, pp. 159-61. It may be also noticed that this is the same kind of approach adopted by a large number of Kantian scholars towards all instances in which Kant explicitly or implicitly deals with the problem of *Schwärmerei*. As a consequence in a more recent literature on Kant, this problem and its implications have been almost entirely neglected.

Plato's philosophy. Two publications, J. G. Schlosser's *Platos Breife über die syrakusanische Staatsrevolution* and Count F. L. zu Stolberg's *Auserlesene Gespräche des Platon*, were central to this return to Plato. What we find in these two books is a combination of the philosophy of feeling, based on the reading of Plato, with a kind of Christian sentimentalism. At the same time both Schlosser and Stolberg shared aristocratic and antirevolutionary political views. Schlosser decided to translate the letters attributed to Plato concerning the failed revolution in Syracuse in order to demonstrate the futility of political revolutions. Count Stolberg presented Socrates as a victim of democracy and the forerunner of Jesus. According to H. Heimsoeth, there was a widespread "Plato-enthusiasm" in Germany during 1790s. Goethe also took a sharply critical stance towards the latter's book.[87] I will briefly turn to Kant's polemic response as it offers an additional aspect to the restrictions concerning knowledge-claims to the ones established in the *First Critique*, which hinges on the notion of social acceptability.

Kant's agenda against the Christionizing Platonists, or mystagoges as he calls them, is to criticize the tone in which this kind of writings evolves. It is the tonal dimension of their discourse that should raise a wide social concern. The tonality is important in its own right as it is constitutive of the very possibility of universal communication. For if the tone is meant to be attuned with the things felt beyond the limits of the

[87]See, *Superior Tone*, translator's note, pp. 72-4.

conceptualizable, it may not only defy analyses but elude communicability. In Kant's early writings the problem has been described in the following way,

> During the universal stillness of nature and resting of the senses, the concealed cognitive capacity of immortal spirit speaks an unnamable language and gives many undeveloped concepts that can certainly be felt but cannot be described.[88]

The "unnameable language" losses the descriptive and prescriptive properties and its emotionally charged "concepts" latch onto sentiments. This language is, nevertheless, a language of complete revelation. The *First Critique* obviously sanctions the accessibility of insight through such means. Yet discussing the design argument once again, the comprehension of the world as an "immeasurable a stage of variety, order, purposefulness, and beauty," Kant says, requires going beyond language "so that our judgments of the whole must dissolve into a languageless but, for that reason, all the more persuasive astonishment."[89] However, such comprehension involves only a private experience in the sense that it cannot demonstrate the existence of God or persuade anyone to believe in such existence.[90] By postulating an ultimate object in the sphere of the merely thinkable, and supersensible, we sacrifice the communicable. In this sense a difference between discourse on the knowable (objective, publically

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[88]*Natural History*, p. 196. See also Fenves, p. 5.

[89]*First Critique*, A 622, B 650, Fenves' translation, p. 7. Kemp-Smith translates it, "And that our judgment of the whole resolves itself into an amazement which is speechless, and only the more eloquent on that account," p. 519.

[90]For a history of Kant's use of the concept of the "tone" and related problematic, see Fenves, pp. 5-8.

shared) and discourse on the thinkable (subjective, private experience) should be understood as merely tonal. To be attuned to a feeling that erases the distinction between the inner and the outer, the feeling and enjoyment of exaltation, entails a tone which is altogether different from that of reason. Due to this problematic Kant's polemical essay is entitled *On a Newly Arisen Superior Tone in Philosophy*.

Kant characterizes Schlosser's mystical Christian Platonism along the familiar lines of the knowledge of the supersensible. Schlosser's claims do not involve concepts as means but only the faculty of intuition. It is indeed the intellectual intuition that allegedly presents and grasps the objects immediately. In contrast to science that demands work, one needs only to listen and enjoy the voice of oracle within oneself. As it offers a direct access to the things in themselves, it is far more noble and 0superior to the means of those who have to work through concepts and find ways of justifying themselves. Superiority is equally reflected in the high aims and claims to more effective means. Such are the claims and promises of mystagogues, but what is this fashion of philosophizing really offering to make itself credible and live up to its high esteem? Kant's answer is nothing, for "a question has been raised so high that it no longer makes any sense."[91] It amounts to pondering over an idea in oneself which, he or she can neither make comprehensible nor communicable. There is nothing to contest or verify private experience. Thus on the scale devised on the basis of assent upon certainty, knowledge, belief and opinion are followed by complete uncertainty

[91] *Superior Tone*, p. 56.

which Kant calls an "intimation" of the supersensible. Intimation defies any conceptualization and leaps to the transcendent without the possibility of cognizing the object. Instead it rests on a "mystical illumination" which is a surrogate of an object of knowledge. Finally, it consists of a *salto mortale*, a mortal vault for philosophy as it leaps beyond concepts into the unthinkable or unrepresentable.[92]

On the one hand, Kant's critique of rational capacities avoids a suicidal enthusiasm and necessarily leads to moderation. If such a critique opens the passage to the supersensible it does so only from a practical point of view. This passage is produced by reason itself in order to provide practical laws for our free actions. The laws are of a formal character and do not announce anything about the transcendent principles. That is the voice of reason, in contrast to the voice of oracle, proceeds to the supersensible in accordance with an examination of its own powers and a plan derived from this insight. Only a logical procedure arrives at a moral law in an authentically philosophical way. A procedure which intimates and personifies the principles of morality amounts only to an aesthetic mode of representation of the moral law. Thus the mystagogues use the name of philosophy in a preemptive way, so that such use erases its significance altogether. But, another encumbrance of the mystagogues' procedures is even more alarming, as they "always run the danger of falling into an exalting vision [*schwärmerische Vision*], which is the death of all philosophy."[93] Such risk is indeed of a social concern,

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[92]Ibid., p. 62.

[93]Ibid., p. 71.

> because it is so easy to attain the peak of insight by a bold leap without effort, [the philosopher of **vision**] can surreptitiously gather a great following around himself (for boldness is contagious)-a phenomenon that the police in the realm of science cannot tolerate.[94]

Mystagogein means to lead, initiate into the mystery. *Agogein* is the leader capable of manipulating a number of followers gathered in a sect, a clique that enjoys a private access to the mysterious secret. Throughout history, Kant points out, such associations never fail to take themselves as an elite, superior and apart from society. Therefore the differences between the gifted and effortless mode of knowledge of genius and the mode of laborious scholars have an overtone of the opposition between aristocracy and democracy.[95]

The consequences of a high tone are thus damaging not only to philosophy but to society at large. The voice that speaks in or to the chosen in private, jealously kept from the public, from ordinary people, requires a social critique. Kant's twofold address is of a proper political character. On the one hand, it is necessary to institute preventive mechanisms which would "police in the realm of science." Derrida relates this suggestion to the plan for a university tribunal presented in the *Strife of the Faculties*. The tribunal was intended to arbitrate the conflicts between philosophy (lower faculty) and theology, law and medicine (higher faculties). In this parliament

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[94]Ibid., p. 69.

[95]See, Derrida (1992), pp. 127-8.

of knowledge, philosophy's role is to instruct rather than issue orders about the status of theoretical propositions and formal questions concerning practical reason. The other questions that pertain to existence, are left to the jurisdiction of higher faculties, theology in particular. Professional philosophers that overstep this field of philosophical enunciation cannot be pardoned for raising their tone above their colleagues. This is prohibited, Derrida points out, because it is done "by perverting the voice of reason, by mixing the two voices of the other in us, the voice of reason and the voice of oracle."[96]

However, at the same time Kant says that partisans of the voice of oracle are not so far removed from Critical philosophy, as "the veiled goddess before whom we of both parties bend our knees is the moral law in us."[97] The difference is that the latter approach is properly philosophical while the former is only a form of aestheticizing the moral law and is prone to *Schwärmerei*. Therefore in accordance with the idea that the critique of reason brings an end to the natural state of reason and conflicts that go with it, Kant now offers a peace treaty to the philosophers of vision. As both parties have the same practical and didactic purpose in common, it should not in his view, be too difficult to reach an agreement. In other words, the peace in philosophy, that is the publically shared set of legislative procedures, relies on coming to terms with Critical philosophy.

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[96]See, ibid., p. 130.

[97]*Superior Tone*, p. 71.

Whichever way we take Kant's strategy, as a "legal" action against dissemination of mystagogical ideas or as a proposal for the agreement on legislation, there is an imperative that tells us to keep the tone low. That is, to be faithful to the voice of reason, not to attain, or mix it with the voice of oracle. Otherwise philosophical discourse faces its own death. With this requirement Kant's problem of *Schwärmerei* comes to its closure. What initiated the questioning of the exalted, the world of spirits, the supersensible, the conception of the limit and demarcation, was at first a problem in so far as there were no adequate procedures either to substantiate it or to refute it. Kant was still undecided in *Dreams* as to what the status of such claims may be. Thus he solicits it by changing and mixing voices (of reason and oracle) all along. It seemed appropriate to explore the issue from both the high tone that earmarks such claims, and the low tone of reason and common sense. The *First Critique* places the exalted knowledge-claims on the very limit of the unknowable and cuts them out of philosophical or scientific enquiry. Through an examination of our faculties it arrives at legislative principles on the basis of which all disputes in epistemology can be settled. *Superior Tone* extends the results of the *First Critique* into the field of social actions. Applying its conclusions means ostracizing those who profess knowledge through intellectual intuition either by actions of academic institutions or by bringing them to terms with the legislations of Critical Philosophy. No longer can the *Schwärmerei*-like tone be tolerated or passed over in a dignified silence.

7 Some Comparisons: Kant and Newton

We have now, if not surveyed all the *loci* of what I provisionally called Kant's epistemological geography, at least indicated the problematic, and its scope, instrumental to locating and ascertaining the *Grenze* of legitimate knowledge-claims. There is no doubt that the outcomes of Kant's critique and their applications bear the marks of many other problems which evade the *Schwärmerei* problematic. However, I hope that this study has established the importance of thinking Kant's *Grenze* through the problem of *Schwärmerei*. Or to be more precise, Swedenborg's doctrine from the outset of the conception of the Critical philosophy through to its application in the field of social action, not only figured as the Other to the scope of knowledge, but its otherness was also responsible for the way in which the very demarcation lines were drawn, that is, indicated in terms of what can be known and why.

At the end it may be useful to look for immediate implications of Kant's demarcation criteria by contrasting them to Newton's methodology. I will not be able to do more here than offer a sketchy comparison. Therefore I will attempt to indicate the scope of permissible or productive knowledge-claims in each case rather than, for example, examine the different ways in which Newton and Kant try to justify the postulation

of a force "acting at the distance." We can begin with the comparison by emphasizing Kant's innovation: the distinction between epistemology and science proper. The questions concerning knowledge in general are to be resolved within a single set of logical procedures independent of any theoretical considerations in particular sciences. We make scientific theories conform to the general epistemological edifice rather than modify those commitments according to the current developments in research. Thus in *Foundations*, Kant interprets Newton's physics so to fit the general outlines of the *First Critique*.[98] Ideally, the validity of the outcomes of epistemological investigation, i.e. transcendental method, should not rely on actual scientific practices. However as insisted here, natural science and Newton's physics in particular, provided the model for Critical procedures. In the last instance the scope of knowledge is the scope of empirical science in which natural science and especially physics, plays a dominant role. Now, the criteria of demarcation are based on the possibility of having knowledge of a particular object. Objects are to be demarcated on the basis of their conditions of possibility, that is, satisfy the conditions of synthetic *a priori* knowledge. This does not mean that we cannot make use of purely empirical laws. However in terms of demarcation, *a priori* principles are the only means of arbitration. Thus Kant writes,

> In order to obtain any information concerning the particular empirical laws, we must resort to experience; but in regard to experience as such, and as to what

[98]See, Buchdahl (1970), p. 100-1.

> can be cognised as an object of experience, the *a priori* principles alone can instruct us.[99]

Following these *a priori* principles we are able to infer which objects are sufficiently empirically determined. Objects that do not satisfy these criteria are decisively unknowable. Kant envisages a number of such objects which he calls supersensible. The exception however is that the practical use of reason can have a limited access to the domain of the supersensible. Therefore the application of the criteria of demarcation in science implies making a distinction between objects of possible experience and supersensible objects. These criteria not only imply that knowledge-claims should be considered as scientific or non-scientific, but that they belong either to the domain of knowledge or to the domain of the merely thinkable. Pressing the claims in this latter domain would amount to pseudo-knowledge.

On a first reading, some of Newton's terminology appears to be consumed into the language used by Kant to determine the demarcation-lines. If we look at the already cited passage where Newton defends himself against the charges of "occult qualities," for instance, we find gravity to be a "manifest quality." That is, an active principle, "by which the **things themselves** are formed; their truth appearing to us by **phenomena**." Their causes however are occult, not their qualities.[100] Thus what justifies the status of the laws of gravitation is the empirical determination of

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[99] *First Critique*, B 165, p. 173. Translation modified according to Buchdahl (1969), see p. 652.

[100] See, *Opticks*, p. 542, [my emphasis].

phenomena explained. If we do not know the causes we can nevertheless infer from the *phenomena*, make them more general through induction and "consider" them mathematically. The access to the "things themselves," therefore, goes through the explanation of *phenomena*. And there is inevitably a potential "causal" relation between the two. Newton is not prepared to "frame" any hypotheses concerning the "cause" of gravitation. He insists that his procedures are solely inductive and he is not ready to accept any hypothetical inferences. Thus far, and perhaps on a superficial level, irrespective of the difference concerning induction and *a priori* conditions, the cut off points of Newton's and Kant's demarcation seem to coincide.

Nevertheless concerning the status of the "cause" of gravitation, Newton and Kant are led to different conclusions. Newton's distinction between hypothesis and *phenomena* or "being deduced from *phenomena*," implies that he is willing to permit only properly tested and explained empirical instances. But the field of such possible empirical instances for Newton seemed to be undetermined altogether. In Kantian terms, there are no *a priori* principles or limiting concepts of understanding pertaining to the objects of possible experience. In this sense, Newton's use of the term "occult" only applies to the unknown not to the unknowable. Therefore the so-called "occult causes" are "yet to be discovered." As it was pointed out in the first chapter, at least some time after the completion of *Principia*, Newton had high hopes of rendering them into empirically determinate terms. He conducted experiments in alchemy, for example, or collected historical and scientific data from other sources, in order to find an

explanation which would secure a "non-hypothetical" status to the theory of gravitation.

Kant, on the other hand, following his criteria of demarcation places the cause or causes of gravitation amongst the *noumena*. Although he does not discuss the apparent occult nature of such objects, they are on several occasions pointed at along the Swedenborgian supersensible objects. His initial endorsement of the model of Newtonian physics as opposed to mathematics in the *Prize Essay* makes no explicit reference as to their knowability,

> Even though we do not understand the ultimate causes of appearances in bodies, it is nevertheless certain that they occur by this law [which Newton discovered], and we explain complicated natural events when we distinctly show how they are included under these well-proved rules.[101]

But in the context in which Kant discusses the well-established cases of occult phenomena in *Dreams*, he explicitly states that concerning the force of attraction "there is nothing we can know than we do know [already about it]."[102] In the critical period, this position has undergone a considerable sophistication. Kant does not want to dispense with the "cause" and thus the force of attraction as it may undermine the epistemological status of Newton's theory. At the same time he is determined to

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[101]Quoted in Beck, p. 442.

[102]See, *Dreams*, p. 96.

consider the "causes" of non-aethereal nature as *noumena*. Thus, the rejection of the postulation of such causes can be found on several places in the *First Critique*.[103] It is interesting to notice that on two out of three such occasions that I encountered, Kant points at non-aethereal "causes" of gravitation as unknowable alongside with the "Swedenborgian objects."[104] As this practice continues in *Orientation* one would be tempted to see them as two prime examples of the unknowable, isolated and group together primeraly due to their occult nature. Thus considering the scope of legitimate hypotheses in the *First Critique*, Kant says,

> It is not permissible to invent any new original powers, as, for instance, an understanding capable of intuiting its objects without the aids of senses; or a force of attraction without any contact; or a new kind of substance existing in space and yet not impenetrable. Nor is it legitimate to postulate a form of communion of substances which is different from any revealed in experience, a presence that is not spatial, a duration that is not temporal.[105]

Therefore, the concepts of "immaterial," penetrable substance, non-aethereal causes, and non-spatiotemporality go together. An *a priori* conception of the cause or causes, or a hypothesis, is only possible by postulating contact-explanation, that is an aethereal medium. However, Kant is faithful to Newton in granting the *a posteriori*, empirical avenue to such research. Thus, he says "such fictitious concepts [new substances,

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[103]See, *First Critique*, A 207-8, B 252, p. 230; A 222, B 269-70, p. 241; A 771-2, B 798-9, p. 613.

[104]Ibid.,A 222-3, B 269-70, p.241; A 770-1, B 798-9, p. 613.

[105]Ibid., A 770-1, B 798-9, p. 613.

forces, reciprocal actions], unlike the categories, can acquire a character of possibility not in an *a priori* fashion, as conditions upon which all experience depends, but only *a posteriori* as being concepts which are given through experience itself."[106] In *Foundations* his position is specified in the following way,

> Besides the aether, no law whatever of attractive or of repulsive force may be risked on *a priori* conjectures; but everything, even universal attraction as the cause of gravity, must, together with the law of such attraction, be concluded from data of experience. Still less will such conclusions in regard to chemical affinities be permitted to be tried otherwise than by means of experiment.[107]

A reference regarding the "chemical affinities" here, may mean that Kant was well aware of Newton's alchemical experimentation. Nevertheless, as much as the non-aethereal causes are defined in Kant as "immaterial" or even non-spatiotemporal, they by definition cannot be uncovered in an *a posteriori* fashion. In other words, this avenue is only open to an alternative that does not involve "immaterial," alchemical or occult causes in general.

In short, Newton only insists on the distinction between empirically established knowledge and hypothetical conjectures. He argues that his theory of gravitation is not a hypothesis, in a literal sense, something not yet known to be true or false. Thus,

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[106]Ibid., A 222, B 269, p. 241.

[107]*Foundations*, p. 93.

Newton's approach neither involves a demarcation of the unknowable nor of the practices which proliferate claims about the unknowable. Quite the contrary, his millenarian attitude assumes that the truth in its totality is within our grasp. In addition, his approach implies a plurality of modes of acquiring knowledge. Kant, on the other, responds to the scepticism of his age in a different way. Knowledge, according to Kant, in order to be certain and sound needs to satisfy a number of conditions that act like an all-embracing umbrella. A single set of principles and related procedures determines the scope of knowledge. The epistemological enquiry independent of particular empirical investigations offers a unique set of *a priori* conditions that posit a limit between the knowable and the unknowable. This type of *savoir* tends to impose a legislation that would restrict a proliferation of, at least, one determinable type of knowledge-claim in the public arena.

Chapter 4

Neo-Kantian Demarcation and Astrology

> [SOCRATES] Do you assert that I myself do not believe in gods at all, and that I teach this to others?
>
> [MELETUS] This is what I say, that you do not believe in gods at all.
>
> [SOCRATES] Meletus, you amazing man, why do you say this? Do I not believe, then, that sun and moon are gods, as other human beings do?
>
> [MELETUS] No, by Zeus, judges, since he declares that the sun is stone and the moon is earth.
>
> Plato, *Apology*

The concept of demarcation significantly features in discussions of the philosophy of science and it was originally one of the key concepts, on the basis of which, much of metascientific theory should be tested. It was Karl Popper who isolated the problem, coined the term "demarcation" and did more than anybody else to emphasize its significance. The realization of its role, on his own account, was only possible on the basis of Kant's painstaking effort. Popper suggests in *The Logic of Scientific Discovery* that "if, following Kant, we call the problem of induction "Hume's problem," we might call the problem of demarcation"'Kant's problem"."[1] Kant's initial inspiration,

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[1] See Popper (1972), p.34.

according to Popper, was Newton's theory. The cosmological problem of finitude or infinity of the universe with respect to both space and time led him to his theory of knowledge. Stimulated by Hume, he wrote his *First Critique* in order to establish that the limits of sense experience (delineated by the use of the forms of intuition and the categories of understanding) are the limits of sound reasoning about the world. This line of thought finds some support, according to Popper in Kant's initial idea for the title of what became the first *Critique*, "The Limits of Sense Experience and of Reason," expressed in Kant's correspondence to Hertz in 1771-72.[2]

The problem of demarcating knowledge from pseudo-knowledge is in Popper's philosophy considered to be crucial for the modern conception of science. He at times, even singles it out as "the key to most of the fundamental problems of the philosophy of science."[3] According to Popper, the most important characteristic of empirical science is the barrier which separates science from metaphysical speculation. In other words, we would not be able to determine what a scientific enterprise is without determining its specific epistemological status against seemingly incompatible practices pretending to equally relevant knowledge-claims. This is the reason, apart from his high esteem for Kant's doctrine of moral autonomy, why Popper finds much affinity with Kant's philosophy. The correlations between their two philosophies are so strong that Popper asserts that "the critical rationalism (and also the critical empiricism) which [he] advocate[s] merely puts the finishing touch to Kant's own

[2]See, Popper (1962), pp. 175-80.

[3]See ibid., p.42.

critical philosophy".[4]

The concept of "demarcation," as used by Popper and other contemporary philosophers of science, cannot be directly applied in a Kantian context. Popper's account of demarcation is grounded on the analyses of actual scientific practices, past or present. Popper makes an evaluational claim, ranking science as better (and more rational) than pseudo-science. Ideally, adequate criteria of demarcation should prescriptively guide scientific behaviour, rather than simply describe it. However normative the criterion is, it is to be considered as a proposal for an agreement or convention among parties having some purpose in common. In the last instance, the justificatory principles of science are derived from value judgements such as the definition of empirical science and the methodological decisions that depend upon this definition. It is incumbent on scientists to decide how far a particular criterion, like falsifiabillity, conforms to their own intuitive idea of science and its procedures. Scientists as well as metascientists should be guided by an attitude of "modified essentialism" and proceed **as if** there are essential features of science to be revealed in as systematic a way as possible. Kant, on the other hand, undertakes an extensive critical analysis of epistemological properties of the human mind. In the course of his examination he encounters the limitations of human knowledge which should ideally of themselves demarcate the borders of legitimate knowledge-claims. My intention was partially to show that in addition to purely epistemological procedures, Kant was bound to consider knowledge-

[4]Ibid., p.27.

claims and related actual practices in order to determine his limiting concept of *noumena*. However, the procedures that settle demarcation in the context of Kantian philosophy, remain much more fundamental than in the case of Popper. The critique of reason, according to Kant, necessarily leads to scientific knowledge and closes its natural borders. It shows that the employment of reason which is not elicited by the use of material supplied by empirical data, does not provide any positive knowledge and necessarily leads to ungrounded knowledge-claims. It is the limitation of the capacities of the epistemological subject that demarcates knowledge from pseudo-knowledge and science from pseudo-science. Kant's essentialism need not be immediately connected to the crucial features of certain practices which then qualify as scientific. It stems from the idea that there are some essential properties of the epistemological subject which prevent acquisition of knowledge in certain domains.

If the form of *Schwärmerei* was used by Kant to exemplify the limiting concept and that which may exceed it, philosophers of science discuss the criterion of demarcation by contrasting scientific practices to astrology. Popper initially pointed at Freud's psychoanalysis and Marxism as practices that do not satisfy scientific criteria. However, he found his prime example of pseudo-knowledge in one of the *scientia occulta*, namely astrology. The case appeared to be so remote that much of the consequent debate over demarcation revolved around an adequate criterion that would demonstrate that astrology is not scientific. In this final chapter, I will examine the neo-Kantian conception of demarcation in relation to astrology. I will argue that if we conceive the demarcation criteria on the basis of actual scientific practices, past or

present, we encounter two sets of problems. The first problem is that of how to devise a sufficiently flexible criterion that will encompass all the instances from an increasingly diverse and atomized field of scientific practices which to some extent match "our," or at least, scientists' understanding of what is scientific. Such criteria would have to, at the same time, decisively demonstrate the non-scientific character of practices like astrology. I contend that none of the criteria proposed by Popper, Kuhn or Thagard can adequately serve this purpose. The second problem, perhaps more serious, is that practice-guided demarcation does not offer assurances against partial or ideological criteria held by a majority of practitioners of what is conceived to be a single practice, where such a majority happens to be in the position of power. In other words, what would prevent the application of practice-biased criteria that are arbitrarily exclusive of practices seen as marginal or incompatible by the practitioners of socialy dominant ones?

The reason I have chosen to discuss astrology rather than other so called "alternative", "paranormal" or "occult" practices such as witchcraft or alchemy, is that it claims to have clear empirical implications and because it is widely debated in scientific circles. The other reason is that I believe that the available evidence for the truth or falsity of astrology does not offer an unambiguous answer. In other words, I would not be surprised if, by some set of miraculous circumstances, we were one day confronted with the irreversible proof of either the existence or non-existence of such phenomena. Although I believe that physical evidence may not be the crux of the problem, it seems to me to be insufficient to draw any definite conclusion anyway. My interest

lies rather in probing the conditions which make comparative assessments of incompatible practices possible. To be more precise, I will examine the possiblity of showing the claims of astrology to be unfounded, less rational or unworthy of research resources in light of a coherent body of well-tested hypothesis from across the board of scientific practices. Following the second problem of practice-guided demarcation indicated above, I will suggest that the issue of the epistemological status of astrology cannot be settled by answering the question of whether astrology is scientific or unscientific, if "scientific" is taken as a common denominator used to characterize some number of social practices. Thus my concern with the possibility of constructing a "cross-practice" evaluational criterion will not only have epistemological, but also cultural consequences.

1 Astra et Aspera

Astrology is one of those social phenomena that has been around since the first emergence of civilization. The belief that stars influence life on earth was shared by ancient cultures from China and India, Babylon and Egypt, to the Aztecs and Mayas. Some historians believe that if we could show that there is no direct link between some of those cultures, it would make a strong case for the epistemic credentials of astrology. However, so far, there are very few comparative studies that would enable

us to say that astrology is a body of knowledge which appeared quite independently in different cultural settings. Apart from this problem, the plural origins of a certain idea do not necessarily imply its epistemological validity.

The amount of effort spent in tracking the position of planets in the sky and fashioning their symbolic values is truly impressive. Inasmuch as this is true, astrology, with all its diversity and often incompatible conceptions, constitutes a resilient and universal ingredient of life in developed and urban societies. Today, astrology as a practice cannot live up to its historical pretensions. There is little agreement on its interpretative procedures and the relevance of its symbolic factors. There is also no tentative consensus on the resolution of problems posed by astronomy. For example, astrologers still widely cast their charts according to an old calculation of stellar constellations, ignoring the precession of the equinoxes. The situation with the theoretical backing of the practice is even worse. Not only is there no comprehensive theory that offers a plausible explanation of the phenomena, but there is scarcely any attempt to provide one. Astrologers frequently use a language that is more appropriate to an "initiate" than to the scientifically oriented modern reader. Some of the theories of astrology seek justification in a synchretic way drawing data without an apparent cohesion from different cultural heritages. Theorists of astrology often refer to recent scientific investigations that allegedly have some relevance for their work as well as to metalevel theories of science. But once they try

to frame their questions and answers they evade the metascientific debate[5] and recurrently offer sweeping resolutions.

The initial claims of astrology are based on an age-old belief in the correlation between macro and micro cosmos. Astral bodies are believed to have certain influences on objects on the surface of the earth. Amongst them the most potent are the ones that are the closest to the earth: the Sun and the planets of our solar system. Individuals, physical objects such as buildings or machines, as well as social entities like the state are all marked at the moment of their birth, at their announced moment of production or constitution. This impact does not only concern their character but somehow guides the history of their existence. The nature of impact varies according to the "character" of dominant planets, their position in the stellar constellation and their relation to the Sun and other planets in geometrically ordered astral space. Therefore, the states of affairs in the macro world are imprinted on individuals in the micro world at the significant moment of their birth.

Unlike some other seemingly indestructible social phenomena astrology was, at times, considered as an important embodiment of legitimate knowledge. It may be understood as occupying one pole in the heterogeneity between nature and man. In other words, it accounted for the deterministic relations in nature and the individual's dependence

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[5]See, for example, Gregory Szanto, *The Marriage of Heaven and Earth: The Philosophy of Astrology*, London: Arkana, 1985.

on natural processes at large. Its opposite magic, was seen as a practice that enables one to break the deterministic chain. Within the field of free choice, and by means of the power hidden in individuals, the magician makes interventions in the prestructured (super)natural order. This conjunction between astrology and magic may be seen for example, as a precursor to the initial Kantian problem of the double-bind conception of man, being torn between the determinism of nature and the freedom of will. And indeed, it is the same problem that urges a double application of reason, theoretical and practical, a division of knowledge into the domain of nature and the domain of man, and sciences into natural and social, that was in ancient times explained through the axis of astrology and magic.

The common understanding of astrology in modern times often overlooks this tendency towards universal applicability. Astrology is usually treated as a particular body of knowledge, or *connaissance* in Foucauldian terms, that deals with one aspect of natural phenomena and that may only be compared with particular scientific disciplines such as astronomy or psychology. However, I argue that this is a misinterpretation of its field of enunciation. Its role, in the past, was not only to give predictions concerning an individual's life and provide much needed significations for it. Its theoretical assumptions based on a system of symbolic relations provided a methodology for a whole field of practices which were to become scientific, in the modern sense of the word. For instance, the inquiry into the occult properties of astral bodies was intrinsically connected to the account of their physical properties. Those latter properties are considered as manifestations of the former, the inner and hidden

qualities of the planets. Hardly anybody today tries to conclude anything concerning the emotional predispositions, creative capacities or moral standards of an individual by analysing the shape and proportions of one's body, as Renaissance disciples of physiognomatics did. The relation between astronomy and astrology, at a macro level, may be properly illustrated through the analogical relation between physiognomatics and psychology, at a micro level. Within the astrological paradigm the task of astronomy, apart from providing information about the position of the planets, was to offer inferences about the "inner character" of the planet from its appearance, physical properties such as size, surface configuration, speed and regularity of movement, etc. Alchemy, the precursor of modern chemistry, is based on an assumption that chemical substances possess particular qualities derived from the nature of their astral rulers. The mixture of different chemical substances may produce a new entity with superior qualities in relation to its initial elements, just as an astrological aspect or the relation between two or more planets in the sky brings into fusion their symbolic value.[6] This fusion may introduce a beneficial influence on an individual born under the "lucky stars". Astral influences equally affect chemical materials and organic bodies. According to astrology each and every part of the human body is governed by a certain planet. Depending on the natal (or birth) chart some parts and functions of the

[6]For example, it is said that Mercury represents the *logos* or the messenger of God, since it is the nearest planet to the Sun. As such it symbolizes reason, in its function of gathering the data and speech. Its influence may range depending on the aspects, i.e. angular relations with other planets in the horoscopic circle: with the Moon (imagination) it gives literary talents; with Venus (beauty), an artist or art critic; with Mars (action), a skilful person and a good coordination between mental and practical activities; with Saturn (persistence), a talent for logic, good concentration and memory; with Jupiter (justice), a talent for ethics and politics; with Uranus (revolution), a strong intuition and according to astrologers' claims it should occupy a significant position in the charts of inventors.

body would be more vulnerable and susceptible to disease than others. The medical cure corresponds in nature with the astral ruler of the body-part and its function. Finally, the faculties of mind and properties of psyche in general, again, denominated by particular astral influences, bear resemblance to inner properties of planet-rulers. The applications of astral symbolism to the human psyche may be complex due to a wide field of possible relations between ten astral bodies in different star-signs, houses and aspects. What is evident from the foregoing explanations is that astrological procedures find their legitimate place within most of the fields, such as astronomy, chemistry, medicine, and psychology, that were to become seen as scientific practices in modern Western societies. It provided a methodology for investigations of the different aspects of natural and social phenomena, embodied in different practices. For this reason it would be more appropriate to characterize it as a paradigm, in the Kuhnian sense, than a particular body of knowledge.

2 Practice-guided Demarcation

Before I indicate what the multi-faceted and "paradgmatic" role of astrology implies let us consider the demarcation criteria of Karl Popper and Thomas Kuhn. As I have stressed before, the plausibility of those two most often debated demarcation criteria, seem to rest, to a large extent, on their capacity to exclude astrology from scientific discourse. Popper takes falsifiability to be the crucial criterion to be met by practices

in order to satisfy scientific standards. This means that a practice is scientific if, and only if, the theories that it generates have deducible statements which can be empirically tested. On the basis of testing deducable observation or basic statements the theory can be falsified, i.e. shown to be false. The theory can never be conclusively verified but only conclusively falsified. Following his criterion of demarcation, falsifiability, Popper concludes that astrologers' interpretations of the charts and predictions are so vague that they can explain away anything that might be considered as refutation. In other words, in order to escape falsification they destroy the testability of the theory.[7]

Kuhn, on the other hand, urges a bolder and not necessarily decisive demarcation criterion. However, for different reasons, he agrees with Popper that astrology is not a science. His question of its status is merely historical, since he claims that astrology is not intellectually reputable today the way it was in the past. Although he does not state it explicitly it seems that he considers contemporary claims of astrology as of no avail because they are incompatible with "scientific knowledge". According to Kuhn, Popper's account of astrology "catches something of the spirit of astrological enterprise." However, falsifiability fails as a criterion of demarcation. He states that the failure of predictions is a conscious and calculated risk in any type of astrological practice. Nobody becomes an astrologer because he or she believes that all its predictions (or even most of them) come true. It is equally impossible to characterize

[7]See Popper (1962), especially the chapter "Science: Conjecture and Refutation", pp.33-41.

astrology as non-scientific on the basis of the way its practitioners explain failures, especially if one bears in mind the complexity of their task in the past (the unreliability of astronomical tables and the impact of minor calculation errors on casting the chart). Similar arguments are regularly used today to explain failures, for example, in medicine or meteorology, and in times of the crisis of a paradigm in certain fields of exact sciences such as physics, chemistry and astronomy. He capitalizes on historical instances that indicate that "astrologers made testable predictions and recognized that those predictions sometimes fail." So, there was nothing unscientific about astrology concerning the form in which the predictions were cast nor the way its practitioners explained the failure. Kuhn draws examples from the history of science to illustrate that falsification of a particular historically given theory does not necessarily or even regularly imply its subsequent rejection. It is the scientific community with all its social and personal needs that is the final arbitrator responsible for the shift of paradigms and ultimately scientific progress. What qualifies astrology as unscientific is the absence of the paradigm-dominated, puzzle-solving activities characteristic of what he calls "normal science". This roughly means that astrologers lacked the set of theoretical assumptions commonly shared by all practitioners of a particular science at a given time which would have helped them frame their problems, generated by failures in the past, and seek plausible answers. If the predicted outcome of a prediction failed to occur, it did not urge them to modify the theoretical framework. In short, astrology fails to conceive a methodology that would enable it to propose hypotheses intended to correct the past failures based on

empirical evidence and secure the development of the practice.[8]

However, for several reasons neither Popper's nor Kuhn's option seems to suit the purpose even within its own mode of legitimation. Falsification, as a normative methodology of science and falsifiability, as a criterion of demarcation has been increasingly criticized since the late sixties. As it has been frequently stated, the historical records of scientific practices do not support claims in favour of a widespread or a crucial role of falsification. The further problem rests on the status of so called "observation statements" that serve the function of falsifying a particular theory, considered as generally unproblematic by Popper. It has been argued that observation statements are always formulated within a particular theoretical framework with its own terminology. Thus the formulation of observation statements is dependant on the theoretical baggage, i.e. basic assumptions, conceptual corpus etc. that each theory necessarily carries into the investigating procedure. Kuhn would press this point further and claim that different scientific paradigms, e.g. Aristotelian and Newtonian, use incommensurable sets of concepts within Wittgensteinian-type "language-games". In order to account for an observation, for example the outcome of an experiment, statements belonging to two incommensurable scientific paradigms may themselves be incommensurable. This will result in observation statements being open to falsification. In light of such criticism, the vague manner in which the observation statements are framed in astrology, for example predictions involving particular

[8]See Kuhn, "Logic of Scientific Discovery or Psychology of Research", pp.1-23.

indiviuals and the time of events likely to occur to them, cannot be taken as a decisive criterion for rendering astrological practices non-scientific.

An even stronger challenge to Popperian theory comes from Michel Gauquelin's statistical research. Gauquelin's work on astrology is the most comprehensive done so far, having examined more than 25 000 birth horoscopes of European professionals, in a span of over 35 years. Trained as a psychologist, he was able to extract relevant character traits much needed for any statistical investigation of astrology. His research showed a statistically significant correlation between some planets positioned at the rising point, the Ascendent and the Midheaven or Zenith in birth horoscopes of individuals, and their professions. The case was more convincing when considering successful professionals. The, so called, "Mars effect" is particularly present in the case of athletes with probability against chance distribution ranging from 1 in 50 000 to 1 in 1 000 000.[9] Whichever way we interpret the outcomes of his research, one has to admit that at least some astrological claims are testable.

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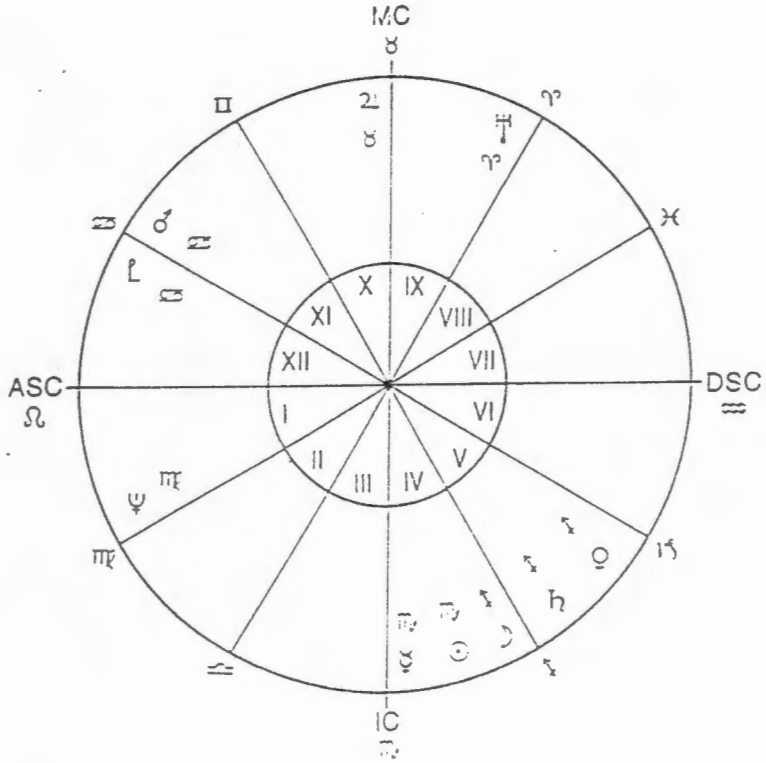
[9]One striking feature of Gauquelin's results is that its implications seem truly devastating for both proponents and opponents of astrology. On the basis of his results, it can be claimed at least that astral bodies do influence "life on earth", as astrology suggests. However, those influences hardly match any of the"traditional" predictions, except the nature of the influence of the planets. Gauquelin finds that only five (out of ten originally claimed) planets have some impact on human character. Moreover, their role is significant in the sections of the sky that have altogether different "connotations" in traditional astrology. According to Gauquelin's investigations, none of the astrological "devices" such as star-signs, houses or aspects have any statistical support.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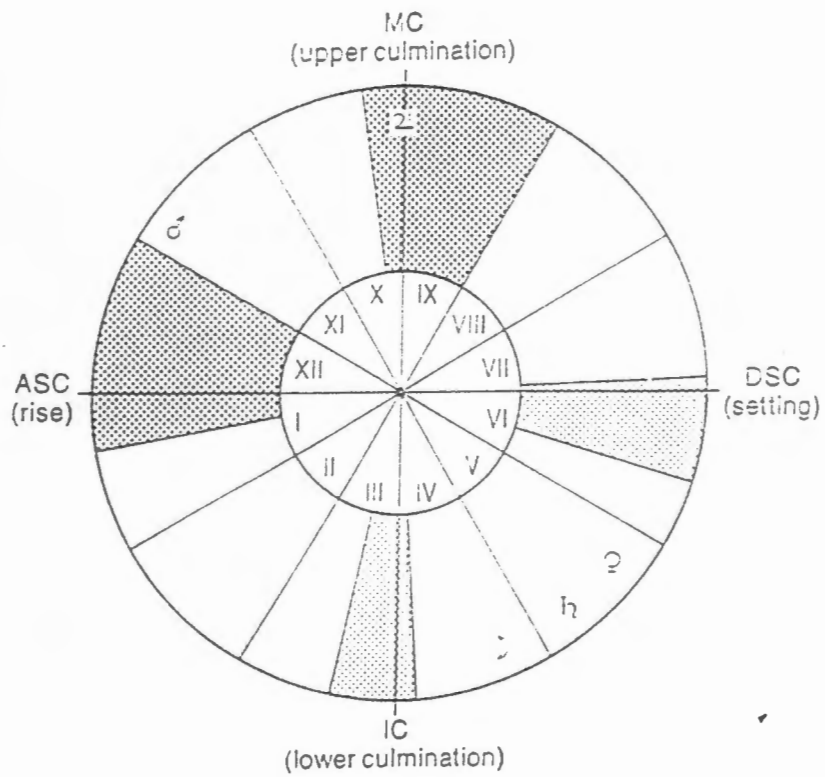
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(rise)
DSC
(setting)
IC
(lower culmination)
X
IX
XI
VIII
XII
VII
I
VI
II
III
IV
V

Kuhn's demarcation criteria have often been criticized for being at the same time too narrow, excluding some practices that have been widely considered as scientific, and too wide, unintentionally including astrology, for example. Paul Thagard has noticed that "astrologers, although generally unconcerned with the foundations of their theory, are involved in puzzle-solving at the level of individual horoscopes". Although he does not offer any explanation, I will try to illustrate this point by the following. The astrologer's interpretation of the chart based on one of its elements (position of the planet in a sign or a house, an aspect between planets, or a combination of those elements) concerning dominant tendencies in one's life, events likely to occur, etc., may be repeatedly denied in the light of evidence from one's life-history. In this case he or she is likely to suspend such judgement in the future and propose a revision of the "traditional" reading of this element. By the same token, if astrologers notice that for the same sort of events we may find the same astrological instances, it is likely that those elements or their combinations will be proposed as a sort of hypothesis for further testing. If we examine the astrological literature that is currently available, we will scarcely find any case of empirical data considered as problematic for the basic theoretical assumptions of astrology, so that they would be in need of alterations. But the books written by practitioners are full of suggestions based on their own interpretative experience of how the meaning of particular astrological elements should be shifted. Astrological puzzles arise when a prescribed meaning of an element repeatedly fails to match empirical instances. The solution is found either in abandoning one feature of its signification or in extreme cases changing its meaning altogether. The change of meaning occurs as a mediation between the astrological symbolic network and empirical cases. In this way astrology qualifies as a puzzle-

solving activity. Since the theoretical assumptions are never threatened, if we apply Kuhn's historiography, the whole history of astrology must be considered as "normal science" that does not undergo any paradigm-shifts or revolutions.[10]

Thagard tries to strengthen Kuhn's demarcation criterion by proposing an additional requirement: "a theory or discipline that purports to be scientific is **pseudoscientific** if... it has been less progressive than alternative theories over a long period of time,..." Progressiveness, here, amounts to "the success of the theory in adding to its facts explained and problems solved".[11] Astrology satisfied the criteria of scientificity in the past, but it became pseudoscientific at the stage when a competing and more progressive body of knowledge appeared. For Thagard this shift of astrology from a scientific discipline to pseudoscience, happens with the emergence of psychology in the nineteenth century when innovations made it a progressive discipline. Unfortunately, he does not give reasons why psychology should be considered as an incompatible alternative to astrology concerning "the explanations of human behaviour and personality". Most of the interesting work about astrology in this century was done by psychologists. Carl Jung indicated the problems concerning the assimilation of its body of knowledge into a scientific domain and proposed additional theoretical explanations for its phenomena. The most comprehensive statistical research has been done by Gauquelin on the basis of psychologically defined traits of character. Hans Eysenck endorses his results and discusses its significance and implications for

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[10]This is also Watkins' remark. See, pp.25-37.

[11]See, Thagard, "Why Is Astrology a Pseudoscience", pp.71-73.

psychology. Moreover, there are many lesser known psychologists that use astrological methods in their daily practices. All this suggests that astrology and psychology are taken as complementary rather than incompatible by some number of psychologists. Since in practice we cannot find support for the incompatibility between psychology and astrology, Thagard's criterion of progressiveness cannot be a decisive adjustment of Kuhnian demarcation criteria.

One of the major problems of the demarcation debate involving Popper, Kuhn and Thagard lies in their narrow understanding of astrology. Their accounts of astrology do not reflect the "remoteness" of the practice that made them choose it as the prime case for testing demarcation criteria, at the first place. Something of the "spirit of astrological enterprise" is irredeemably lost if we reduce it to a discipline which gives explanations of human behaviour and personality, and which purports to have testable empirical implications. At bottom, the incompatibility between astrology and science (as conceived by most contemporary scientists and layman alike) may rest more with the basic theoretical assumptions than with the possibility of making their claims empirically testable or adjustable to empirical evidence. A heuristic use of Kuhnian methodology, would suggest that the problem of their incompatibility needs to be addressed at the level of paradigms. If we press the Renaissance and early Enlightenment distinction between physical and occult causes, science and astrology would be truly incompatible. One of the assumptions that is most often used as an example of a premise universally shared by natural scientists is that "every event has a cause." In its contemporary use, the premise may also be formulated as "every event

has a **physical** cause." By contrast, astrology rests on an assumption that "every event may have an **extraphysical** cause." Therefore, if one is commited to the idea that "physics is the furniture of the universe,"[12] he or she would have to reject astrology *tout court*, irrespective of its empirical credibility. A debate between astrologers and physicalists involving the plausibility of non-physical explanations would thus, bounce back to an age-old metaphysical problem. However, the truth is that we do not know whether the causes of the alledged astrological phenomana are physical or not, in any given sense. Modern explorers of astral influences prefer to label their research as "research of extraterrestrial stimuli." Moreover, we are not certain whether the alleged impact of astral bodies on terrestrial affairs should be considered as causal at all. Carl Jung, for example, suggested that it may be a manifestation of synchronicity. Synchronicity consists of a meaningful coincidence or equivalence of a psychic and a physical state that have no causal relationship to one another.[13] Thus the theoretical framework of astrology contains assumptions that run counter some of the most deeply entrenched beliefs of natural scientists, i.e. beliefs in universal applicability of physical and causal explanations. If we add that astrology alleges to be able to explain heterogeneous phenomena ranging from the domains of astronomy and chemistry to the domains of medicine and psychology, it may be seen as an alternative explanatory

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[12]Hilary Putnam regards this idea as dominant in the modern "metaphysics," from Locke and Hume to Frege, Russell, Carnap and the early Wittgenstein. He maintains that it assumes a "God's Eye View." See, Putnam, pp. 26-30.

[13]According to Jung, this phenomena is extremelyy difficult to access through empirical means and it is said that it may alter the outcome of paranormal research, i.e. the psychic state of the investigator may have impact on research material. See, Jung *Interpretations of Nature and the Psyche*, p.53, pp.84-92, pp.139-43.

enterprise to science *in toto*, as conceived by most of its current practitioners. In what follows, I will try to illustrate how the qualification of astrology as incompatible with science or unscientific in general, may contrary to what is usually believed, hinder the assessment of its epistemological status rather than facilitate it.

3 Practice-Guided Demarcation and Policies

Having overlooked the major features of astrology, metascientists are not able to prescribe a "cure" for it. If one, perhaps for sound reasons, evades the Kantian strategy of a critique of the subject's knowing powers, there is very limited manoeuvring space left for demarcating, what Kant calls, the supersensible domain. The only option seems to be to conceive a criterion from a standpoint of a dominant or currently legitimate practice. Certainly there are many who would deny that a diverse and increasingly fragmented field of scientific practices may be properly determined and encompassed under a single methodology, or can be fully characterized by functions of research-programmes or by paradigms with their puzzle-solving activities. But let us suppose that something of this sort is possible. There is a set of prescriptive and/or descriptive criteria that characterize the present practices, and trace the origins, of something called "science." Apart from prescribing/describing scientific procedures, it provides the means to evaluate practices, so that it can be said which one is scientific and which one is not. Scientists on the basis of their rational judgment, or even social and

personal needs, are there to endorse and therefore legitimize the criteria in a democratic way. The question however is, how likely is it that they will choose the set of criteria that includes the practice they are poorly informed of, if at all; that researches a remote epistemic domain by their own standard; and that has been culturally marginalized. Suppose that chess players form a debating club that should decide which games practised in society are better or more rational than others. They reach a concentual agreement that prescribes a legitimate place for each particular game practised in society. It would determine, for example, which games should be exercised in the form of public competitions, how much tax-payers' money should be spent on organizing those competitions, training of the players and publications concerning the game, how much television time should be allocated to them on the national networks, and so on. It would also determine which games are not worthy of public support, so that society will not be at a loss if they eventually die out as practices. I suspect it would not be surprising to find chess players arguing that chess is superior to, let's say, the game of bridge. They would be able to point out that bridge involves an element of chance that chess does not, so the outcome in chess solely depends on players' rational skills and talent. They could also examine the practitioners of the game and show how top competitive players in chess tend to be young and at the peak of their capacities, while top players of bridge may be in their late sixties. But the reverse situation may also be imagined. The players of bridge debating club would, perhaps, try to counter the claims by stating that the element of chance is the very feature that catches the nature of games in general and that senior players perform well because of their immense experience. Now imagine that chess players came across an ancient game of *Ars Geomantica* and find out that the game

has been widely endorsed by popular culture and practised only by a very small number of chess players. *Ars Geomantica* is a method of divination, similar to *I Ching*, but lacking any commentaries.[14] The entire interaction of the game consists of chance. The chance, here, brings into play the whole field of significations that makes up the game. It would not be unexpected to find chess players not only rejecting the game but even perhaps supporting its extinction, on the basis of their preestablished criteria. If geomanticians were to decide on criteria, as they might have had between the thirteenth and sixteenth century, they would argue that the ultimate game lies in one's unmediated interaction with our inner nature or if you like unconscious. In our imaginary case of a hierarchy of games it would not be surprising to find chess players at the rock-bottom of the government subsidies scale.

The purpose of this excursion into game practices is to suggest that the attitude of chess players to *Ars Geomantica* in our constructed example, illustrates the context of constructing the criteria of philosophers of science that may be applied to astrology and similar practices. I believe it shows that any attempt to define demarcation criteria conceived on the basis of a particular social practice or practices may at best be reproached for some theoretical bias, at worst it may result in repressive measures in practice. In the recent past we can find a number of such instances where some parts of the scientific community were involved in issues surrounding the research of so

[14]See, Thorndike, *History of Magic and Experimental Science*, vol. 2, especially pp.99-124.

# of Geomancy.

The greater Fortune.	The leſſer Fortune.	Solis. ☉
Via.	Populus.	Lunæ. ☽
Acquiſitio.	Lætitia.	Jovis. ♃
Puella.	Amiſſio.	Veneris. ♀
Conjunctio.	Albus.	Mercurii. ☿
Puer.	Rubeus.	Martis. ♂
Carcer.	Triſtitia.	Saturni. ♄
☊ Dragons head.	☋ Dragons taile.	

called "paranormal" phenomena, involving astrology. A good illustration may be drawn from the controversies concerning the publication of Gauquelin's results. I will quote extensively from Gauquelin's last book *Neo-Astrology*, before his death in 1991, where he describes the reception of his work.

> My observations were published for the first time in 1955. In the same year, I contacted the Comité Para so that they could verify my work. The committee professed loud and clear that it was especially prepared for this task. In spite of this, however, I had to wait until **1968** for it to decide to repeat **one** of my experiments, that of the Mars effect on champions. For thirteen years I battled against a wall of silence, against a more or less disguised refusal to investigate, but committee's decision (albeit belated) at least represented an admission that my work was of a scientific nature since it could be verified: it was, in the terminology of the scientific logician, Karl Popper, "falsifiable," that is, it was possible to confirm or invalidate it through an experiment.
>
> The Comité Para collected the times of birth of 535 successful sportsmen, produced the calculations and discovered that it had repeated the Mars Effect! . . The frequency curve of Mars from the Comité Para group is so to speak superimposable upon mine. Yet, other sportsmen than mine were used in their experiment. The only thing left for the committee to do was to publish these results. But, for eight years they kept the Mars effect hidden away in their drawers, like a

menacing reminder. It was not until **1976** that, under pressure, they produced a report. What this long-deferred report did say, however, was that I had been mistaken in my methods and that the Mars effect was not proved. Why then wait so long to announce the good news to their colleagues?. . .

. . .this conflict that had at first been limited to two protagonists, the committee and myself, spread and eventually reached the United States, where the famous anti-astrological manifesto had just been published, accompanied by an article by Lawrence Jerome, describing my work as a perfect example of statistical error. I leapt at the opportunity this offered me and demanded, and was granted, right of reply. I then was able to demonstrate that Jerome was an ignoramus and I mentioned my success against Comité Para. As a result, the committee was contacted by Paul Kurtz, editor of *The Humanist* at the time. The scientists defended themselves in a curious fashion, acknowledging that they had indeed replicated the "Mars effect" but concluding that it was meaningless. They asserted that my methods contained an error but were unable to point it out (and for a very good reason: they could not find it). . .

. . .In 1983, the polemic at last died down after the publication in *The Skeptical Inquirer*, the CSICOP official journal, of an article signed by Abell, Kurtz and Zelen. After pressure from critics, the trio found it

> preferable to admit to their errors. They confessed that they had not always been "careful" in their judgements, and even went as far as publicly disclaiming their colleagues in Comité Para. "Gauquelin adequately allowed for demographic and astronomical factors in predicting the expected distribution of Mars sectors for birth times in the general population."[15]

In 1975, a group of 186 "leading scientists", including 18 Nobel Prizewinners, made a public statement referred to above as the "anti-astrological manifesto." The statement expresses concern "about the increased acceptance of astrology in many parts of the world." Scientists approach the issue with much conviction claiming that "those who wish to believe in astrology should realize that there is no scientific foundation for its tenets" and that "it is a simply mistake to imagine that the forces exerted by stars and planets at the moment of birth can in any way shape our future". In addition, they say that astrology is based on magic and superstition and that it is surprising that "in this day of widespread enlightenment and education" it is necessary to debunk such beliefs. The statement was accompanied by two articles by Bart Bok and Lawrence Jerome explaining the case of astrology in detail. Paul Feyerabend reacted to this announcement, calling the manner in which the "arguments" have been expressed "authoritarian." 186 signatures would not be needed, he argued, had there been one sound argument. In other words, the claims are warranted *ex cathedra*, rather than through argumentation. He contended that scientists did not bother to look for research

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[15]Gauquelin (1991), pp.36-40.

published in their own field (astronomy and biology), examining extra-terrestrial stimuli on physico-chemical processes and biological organisms. In addition, he compares this statement with a Roman Catholic document issued in 1484, *Malleus Maleficarum*. In this document, the Catholic church denounces the practices of witchcraft. Feyerabend points out that it shows a thorough knowledge about the subject. It consists of a detailed description of phenomena, official and other explanations, materialistic explanations included. By contrast, he says, the statement of scientists itself shows no understanding of the phenomena in question. Some of the scientists that signed the statement, rejected interviews; when asked to comment on astrology in the media, they replied by saying that they knew nothing about it. Regarding the accusation of the magical nature of astrology, Feyerabend argues that this issue should be left to anthropologists to settle. Nevertheless, if the origins of a certain practice amount to its character, it will not be difficult to argue that science is truly magical. Finally, Feyerabend finds that astrology, "as it is practised now," distorts interesting and profound ideas and replaces them with a caricature. Therefore, the present discussions between scientists and astrologers illustrate "how closely both parties approach each other in ignorance, conceit and the wish for easy power over minds."

On the basis of the above illustrations I argue that if we succeed in isolating the characteristic features of scientific practice or practices, they will not be adequate as criteria which would then conclusively exclude from the field of possible productive research, alternative and much less successful practices in terms of their ability to

predict events or generate explanations. The problems of Popper's and Kuhn's practice-guided demarcation do not lie only in the complexity of accounting for, and encompassing scientific practices. The initial Kantian context of demarcation was marked by an attempt to expose a specific kind of knowledge-claims as illegitimate purely on epistemological ground, i.e. by examining the conditions of possibility of their acquisition by the knowing subject. Taking lessons from the history of épistemè Popper was aware of the shortcommings of such projects and shifted the issue of demarcation to the field of social practices. This move implies however, that the problem ceases to be purely epistemological and inevitably takes social overtones. Popper seems to completely neglect the problem of reification of knowledge invited by his newly devised demarcation debate. Although Kuhn's project intends to correct the insufficiencies of Popper's methodology and takes into account the social aspects of scientific knowledge, it fails to draw adequate implications from it in the case of astrology. As his critics have noticed, according to his theoretical framework astrology would have to be addressed at the level of paradigm rather than at the level of empirical procedures. Thus, both Popper's and Kuhn's account of astrology seem to be inattentive to some range of incompatibilities between the common conception of science and astrology. The incompatibilities, I have arged, go as far as conceiving astrology as an alternative set of procedures for explaining natural and social phenomena. Apart from being an alternative practice purporting to knowledge, astrology does not possess an apropriate discourse that would serve to legitimize astrological claims. In other words, it lacks a set of professionals who act as legislators of knowledge, i.e. operate on the meta-level and discover, describe and prescribe the conditions of astrological knowledge to the community of knowers.

There are no professional theorists who would defend the "conditions of possibility" of astrology against potentially hostile incompatible practices with established mode of legitimation. Certainly, it is possible to argue that the lack of theoretical backing at a metalevel is due to an impossibility inherent in the astrological enterprise. But if one is to take astrology seriously, as Popper and Kuhn intended, one would have to show that there are no modes of legitimation available to astrology in order to discard this factor. Moreover, in a social context, astrology needs to be taken as "minority" practice, both in the sense that it has a smaller number of proponents than opponents and that opponents tend to be closer to positions in society which enable them to shape the official cultural institutions and social opinion at large. Thus, if one is to be sensitive to the issues of reification and impartial in passing a judgment on practices such as astrology, one needs to pay special attention to their incompatibilities with the dominant practices and prejudgmental input resulting from the lack of legitimation mechanisms and overall social perception. By contrast, an assessment of astrology which neglects to consider such precautionary measures and is based on the criteria of a dominant practice, e.g. one version of scientific standards, purporting to universal applicability and warrented by the majority rule may only legitimize institutional forms of biased censorship.

All this is not to suggest that contemporary science and astrology are enclosed in a sort of separate epistemological "safe havens" or are manifestations of particular "forms of life" preventing any critical assessment or research collaboration. To the extent that we do not want to live in societies with sharp antagonism between official

and popular culture or authoritarian majority rule and resilient minority resistance, we need to clearly outline the differences and to strive towards the resolutions of conflicts (one way or another). This would require devising criteria which will be independent in a twofold sense: firstly, criteria cannot be solely centred on a particular practice or set of practices; secondly, in order to achieve unbiased criteria we need to find mechanisms, for example testing standards and procedures, equally compelling and relevant to both the dominant practice and the practice in question which would labour towards a point of view of possible third-party. In addition, we need to guard ourselves against across-the-board criteria which would deny evaluation of each particular case in its own terms. That is to say, it would be inadequate for example, to seek criteria which will at the same time assess diverse practices such as astrology, homeopathy and parapsychology. In practice, such approach would be applicable to institutional arbitration such as distribution of research funds. One of its implications is that any commitment to totalizing principles on the part of the arbitrator, such as for example that scientific knowledge, embodied in current practices, presents the totality of knowledge, prevents an impartial decision. For if we are to acknowledge that in society exist competing practices with incommensurate assumptions as the point of departure for their investigation, arbitration must proceed, heuristicly at least, as if, there are plural modes of acquisition of knowledge.

4 Concluding Remarks

Considering demarcation once more, both Kantian and neo-Kantian criteria seem to fall short of their original intentions. The transcendental method of a rigorous inspection of human faculties on the basis of the "conditions of possibility" contrary to its enunciation, requires some part of the body of knowledge that it does not permit itself to have access to. Or in other words, one needs to know something about the Other of knowledge in order to know where knowledge ceases and thereby define where legitimate knowledge-claims ought to stop. An intelligible conception of what it "would be like" still presents a positive assertion. Thus, Kant gets caught in the gap between the positive and the negative sense of the concept, the capacity of (spiritual) thinking subjects and the incapacity of human thinking subjects, the intelligible and the intellectual. The limiting concept of unknowable *noumena* itself falls into the trap of the transcendental method. The "conditions of possibility" require an infiltration of the Other, of the unknowable into the knowable across the pre-established border. As I have argued, this infiltration goes through a singular line of a particular practice, namely Swedenborgian *Schwärmerei*. In addition, Kant has to resort to regulative principles, the "needs of reason" that, in terms of present standards, may seem suspiciously close to value-judgments, in order to secure an exception to his criteria of demarcation, that is the postulation of the existence of God.

On the other hand, the practice-guided criteria pose an equally ambitious task, that of encompassing and excluding an immensely diverse field. The shortcomings of some of the attempts are also due to an approach that, in contrast to Kant, does not comprise a thorough understanding of the practices "found" outside the scientific field. But the major difficulty arises, as I have argued, because such criteria are practice-centred, thus open to charges of being biased and potentially socially repressive. So, on the basis of, for example the wide-ranging and overwhelming success of a practice with a single mode of legitimation, one would be justified in dismissing a seemingly incompatible practice that is without specifiable modes of legitimation, from the position of power. This form of demarcation thus, may amount to a simplistic repression of the Other.

Having in mind the constraints of the approaches to demarcation treated here, I would shed doubt on the possibility of a plausible demarcation along the lines of the knowable versus unknowable, and scientific versus non-scientific. As indicated, this does not imply that in the lack of a decisive basis for demarcation we are condemned to simple levelling of knowledge-claims or erasing the distinctions between practices. There is undeniably, a descriptive and presumably prescriptive guidance of procedures which enables differentiation and assessment of research programmes and their end-products on the basis of each particular case rather than judging social practices as such. This however requires that special attention be paid to commitments related to the specific field of practice, obtained by individuals involved in arbitration. Estimating the omens on scientific, metascientific and other horizons, projects of

decisive demarcation may lose some or all of their relevance. In the light of an increasing atomization and fragmentation of the scientific field as well as a proliferation of interdisciplinary and holistic approaches, demarcation criteria of the sort questioned here, may relinquish most of their significance. With a growing need to accommodate cultural diversity, "the West" is likely to embrace diverse practices which do not fall into the scientific framework at present, thoroughly examine their conditions of possibility or impossibility, and broaden and reshape the modes of legitimation of knowledge for this purpose. For we learnt from the past that enclosed singularity of commitments with all its propensety to reductionism, not only allows some uncanny exclusions, but often leads to totalitarian rule. And as much as the Enlightenment project is being questioned towards the turn of this century, its dominant strive towards a fully secular discourse in all domains of enquiry, from Hume and Kant, through to Darwin, Einstein and Freud, to Putnam and Derrida, may cease to offer the most desirable objectives. It may not be surprising to find that the project itself involves commitments similar to the religious ones and its objectives as having a sacred character to its bearers. After all, Newton's pluralistic approach, if not his millenarian and other commitments, may not be so far removed from "our" own.

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